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ABSTRACT

This volume contains eleven appendixes, varying from 5 to 165 pages, which describe the sample used in the analysis of ten surveys of American men aged 25-64 to determine the effects of family background, adolescent personality traits, cognitive test scores, and earnings in maturity. The appendixes are (1) 1970 Census 1/1000 Sample; (2) 1962 Survey of Occupational Changes in a Generation; (3) 1966 Productive Americans Survey; (4) 1967-74 Panel Study of Income Dynamics; (5) 1973 NORC Amalgam Survey; (6) 1966 National Longitudinal Survey of Older Men; (7) 1964 Veterans Survey; (8) 1960-1972 Project Talent Longitudinal Survey; (9) 1974 Kalamazoo Brothers Survey; (10) Census Data on Education and Income: 1940-1970; and (11) Project Talent Sibling Sample. Each of the first nine appendixes describes the data collection procedures and restrictions imposed on the sample; describes the survey questions and the variables; discusses the frequencies, means, and standard deviations of these variables; compares these distributions to those in other sample; describes bivariate distributions of key variables; and presents multiple regression equations predicting test scores, education, and economic success. The tenth appendix describes the variables; populations; treatment of missing data; and the distributions and cross tabulations of the variables for three comparison samples. The last appendix briefly covers sample restrictions, means, and standard deviations; and correlations among variables. The eleven appendixes contain 176 tables showing statistical relationships. (EM)

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THE EFFECTS OF FAMILY BACKGROUND, TEST SCORES, PERSONALITY TRAITS AND SCHOOLING ON ECONOMIC SUCCESS

Volume III: Supplementary Appendices

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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Volume 3

Introduction

This volume contains 11 appendices describing the samples with which we worked. Since the first nine appendices have roughly the same format, a brief summary of this format may be useful.

Each appendix begins by describing the procedures used to collect the basic data and the restrictions we imposed on the sample. It then describes the survey questions we used and the variables we constructed from these questions. Next, it discusses the frequencies, means, and standard deviations of these variables. It compares these distributions to those in other samples, and tries to relate any observed discrepancies to discrepancies in either sampling or measurement techniques. Each appendix then describes bivariate distributions of key variables, using correlation coefficients, regression equations, and breakdowns. Finally, each appendix presents multiple regression equations predicting test scores, education, and various measures of economic success.

The tables presenting statistical relationships have approximately the same formate and order in each appendix.

Table 0 summarizes the effects of sampling restrictions.

Table 1 describes the questions we used, their coding, and the frequency distributions for all respondents in our target population.

Table 2 presents the means and standard deviations of these variables for three samples: all men in the target population who responded, all men who provided complete data on all the items that interested us and therefore ended up in our complete data sample, and all men who answered the question but had incomplete data on other items. Table 2A presents correlations among these same variables for the basic sample and the complete data sample.

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Tables 3 through 9 present more detailed data on selected bivariate relationships. Tables 3A and 3B deal with the effects of father's education, Tables 4A and 4B with the effects of father's occupation, Tables 5A and 5B with the effects of siblings, Table 6 with the effects of race, Tables 7A and 7B with the effects of age, Tables 8A and 8B with the effects of test scores, Tables 9A and 9B with the effects of education. Table A in each pair presents the mean and standard deviation of education, occupational status, and earnings for discrete values of the independent variables. Table B presents the regression of these outcomes on the independent variable under study and its square. Table A covers all individuals in the basic sample with data on a given dependent variable, including those without data on the independent variable. Table B covers only respondents in the complete data sample.

Table 10 shows regressions of education, occupational status, and earnings on education and experience simultaneously.

Tables 12-18 differ from earlier tables in that they focus on a single dependent variable rather than a single independent variable. Table 12 predicts test score (where available). Table 13 predicts education. Table 14 predicts occupational status. Table 15 predicts Earnings. Table 16 predicts Ln Earnings. Table 17 predicts Earnings$^{1/3}$. Table 18 predicts Family Income.

The first equation in tables 12-18 regresses the dependent variable on demographic background variables. Subsequent equations add test scores, education, experience, occupational status, and weeks worked. The regressions also add orthogonal squared terms and multiplicative interaction terms where these are significant.[1./]

[1./] These terms were not orthogonalized in the Census sample.

Table 19 shows how these orthogonal terms were constructed, so the reader can calculate the coefficients that would be obtained if the squared or interaction terms were not orthogonalized.

Tables 12A, 13A, 14A, 15A, and 16A cover the entire complete data sample. Supplementary tables (12B, 12C, 13B, 13C, etc.) stratify the sample along dimensions that might logically be expected to affect the coefficients of the other independent variables. Thus we stratify the sample by race whenever we have enough non-whites to yield stable results. We also stratify by age where the sample covers a wide age range, and by test score where one is available. We stratify the sample by father's occupation in virtually every instance, using a trichotemous division into white-collar, blue-collar, and farm fathers.

The foregoing numbering system applies to all samples. If the relevant data are not available, a table is simply omitted. This means that tables are not numbered consecutively in most samples. Many samples inevitably have peculiarities that call for additional tables. We inserted these tables in ad hoc ways that vary from sample to sample. Tables ordinarily appear at the end of the relevant appendix. Pagination is keyed to Appendix labels, i.e. A1, A2, etc. B1, B2, etc.

APPENDIX A: THE 1970 CENSUS 1/1000 Sample

By Susan Bartlett and Christopher Jencks

The decennial Census is the largest and the best known source of information on the relationship between race, education, occupation, and earnings. Published Census tables provide the basis for more generalizations about the determinants of economic success than any other single source, and "public use" samples of Census records have provided the basis for much recent research on the relation between wages and "human capital." While the Census does not provide an adequate overall picture of the determinants of economic success, it certainly provides a useful baseline against which to evaluate other surveys. This appendix presents such baseline tabulations.

The Sample

The Census mailed a questionnaire to every occupied residence in the United States late in March 1970. It asked householders in rural areas to fill out the questionnaire and leave it for an enumerator. 80 percent of the recipients filled it out as requested. Enumerators interviewed the remaining respondents when they came to collect the questionnaire. The Census asked householders in urban areas to mail back their questionnaires. 87 percent did so. Enumerators used telephone followups and personal visits to get data from the remaining 13 percent. If the enumerators could not get information on a household, urban or rural, the Census allocated it the same characteristics as the last processed household.

This has the effect of increasing the weight assigned to respondents in Census tracts with low response rates. If the enumerators obtained information concerning the number of people in the household, the Census allocated only the required number of people. If the Census got one characteristic for an individual, it allocated the individual the same characteristics as the last similar person processed. The Census considered individuals for whom it allocated all characteristics,or all but one characteristic, substituted individuals. The Census reports that it substituted 1.3 percent of the population because of inadequate information. It substituted an additional 1.1 percent of the population due to computer processing problems. The Census followed up persons in the 5 and 15 percent samples more carefully than the 100 percent sample and thus substitution is less for these samples. After allocating values to known non-respondents, the Census Bureau estimated that it had missed 2.5 percent of all individuals. The estimated rate of under-enumeration was 9.9 percent for black males, 4.7 percent for white males aged 25-29, 4 percent for white males 30-39, about 3.5 percent for white males 40-49 , and less than 2.5 percent for white males over 50.[1]

The Census questionnaire indicated that "the householder" should fill it out, consulting other members of the household where necessary. The Bureau offered no definition of "the householder." Most men 25-64 probably lived in situations where they were regarded as "the householder," so most probably filled out their own questionnaires. But there must have been many exceptions. Some wives doubtless filled out the questionnaire for the whole family. Some 25-64 year old men lived with their parents or with other older relatives, and these older individuals probably tended to fill out the questionnaire for everyone in "their" household. There is no way of knowing how much consultation really took place. Roughly one household in six did not fill out its own questionnaire at all, but instead supplied information orally to the enumerator.

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[1] U.S. Bureau of the Census. Census of Population and Housing: 1970. Evaluation and Research Program PHC(E)-4. Estimates of Coverage of Population by Sex, Race and Age: Demographic Analyses. U.S. Government Printing Office, Washington, D.C., 1973. Pp 4-7 and 28-29.

Since enumerators usually prefer to work during the day, they probably got most of their information from women, who are more likely than men to be at home during the day.

In light of all this, one should be somewhat cautious in regarding the individuals under study as "respondents." Some of our data are second-hand, coming from "informants" rather than "respondents." Informants probably "round" their estimates of other people's education and income more than respondents round their own education and income. Informants may also underreport other people's "irregular" income (i.e. income from dividends, interest, rent, self-employment, and temporary transfers like unemployment insurance) more often than respondents do. Unfortunately, neither the Census Bureau nor any other survey organization seems to have investigated whether demographic data obtained from informants is significantly less reliable than demographic data obtained directly from the individual to whom it applies.

Our data come from a 1/1000 Public Use Sample of Census records.[2] Our 1/1000 sample included 43,164 males aged 25-64 in 1970. After we eliminated men who did not report their sex or age, men who reported no earnings or negative earnings for 1969, those in institutions, in the military, or in school[3] in 1970, we were left with 36,693 men. The frequency of each reason for deletion is shown in Table 0.

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[2] We used the 1/1000 "5 percent county group" sample. The "5 percent sample" received a longer questionnaire than other Census respondents. See U. S. Bureau of the Census, Public Use Samples of Basic Records from the 1970 Census: Description and Technical Documentation. U. S. Government Printing Office, Washington, D.C., 1972.

[3] The Census defined "in school" as attending a "regular" school. "Regular school refers to formal education obtained in graded public, private or parochial school, colleges, universities, or professional schools, whether day or night school, and whether attendance was full-time or part-time." See U.S. Bureau of the Census. U.S. Census of Population and Housing: 1970 Procedural History PHC(R)-1G. Advance Issuance of Chapter 15. Washington, D.C. 1974. p. 15-20.

The Variables

Table 1 shows the format of the questions, the coding, and the frequency distributions of the variables used in our analyses. Each merits brief comment.[4]

Race. If a householder reported the race of any member of his household, the Census Bureau used specific rules of precedence of relationship to assign values to those who did not report. If the householder did not report the race of any member of his household, the Census assigned all members of the household the race of the head of the last household processed. 1.0 percent of our respondents had flags indicating that the Census allocated their racial data in this way.

Non-South Upbringing. If an individual did not report where he was born and there were no entries for the questions concerning citizenship and year of immigration, the Census assumed he was native born. The Census did not assign a specific state of birth to non-respondents. 2.9 percent of our sample did not report where they were born.

Years of Education. This item is based on two questions. The first asked the highest grade of school or college an individual had attended.

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[4] See U.S. Bureau of the Census. U.S. Census of Population and Housing: 1970 Procedural History PHC(R)-1G. Advance Issuance of Chapter 15. Washington, D.C. 1974, for more information concerning the Census' variable definitions and the procedures they used to allocate missing data.

The second asked whether the individual had completed that grade. Our variable measures the highest year completed. If an individual over 25 answered the question about the highest grade he had attended but not the question about whether he completed the grade, the Census assumed he had completed the highest grade he had attended. We did not eliminate men who failed to report whether they completed the grade.

2.2 percent of our sample failed to report the highest grade they had attended. The Census allocated each of these non-respondents the same value on Years of Education as the last respondent of the same age, sex, race, and major occupational group. Such estimates contain an appreciable amount of error. These errors are not random. Instead, they are negatively correlated with the true values. Those with a lot of education are likely to be assigned a value that is too low, creating a negative error, while those with little education are likely to be assigned a value that is too high, creating a positive error. Such errors weaken the estimated relationship between Education and traits that are not used in allocating values on Education.

The Census groups everyone with 18 or more years of education into the same category. We assigned all these individuals 19 years of schooling. This procedure is likely to underestimate the correlation between years of graduate education and earnings. It may also bias the unstandardized regression coefficient of graduate education.

Vocational Training. If an individual completed a formal training program in high school, business school, nursing school, trade school, technical institute, the armed forces, the job corps, or an apprenticeship program, the Census reported that he had vocational training.

3.5 percent of our sample did not report whether they had completed a vocational training program. The Census allocated values to these non-respondents using the same procedure they used to allocate education. The Census did not allocate values for the field of vocational training.

Work Experience. The Census did not ask individuals how many years they had spent in the labor force. We estimated each respondent's 1969 labor force experience on the basis of his age and educational attainment. Chapter 12 discusses the pitfalls of this procedure.

Occupation. The Census asked for an individual's occupation during the week preceeding the survey. If the person had two or more jobs, his occupation referred to the job at which he worked the most hours. The Census asked experienced unemployed persons and those no longer in the labor force to report the last job they held. Some bias is introduced into the occupation and earnings relationship since only 89.8 percent of men aged 25-64 are in the same occupation they were in a year ago.[5/]

The Census used two procedures to allocate values to non-respondents.
1) The Census used a person's industry, class of worker and sex to allocate occupation if these variables were closely related.
2) The Census allocated all other non-respondents to the broad occupation group of the last person processed of similar age, sex, farm/nonfarm residence, weeks and hours worked and years of school completed. 5.3 percent of our sample failed to report their occupation.

Annual Earnings. Like the Census Bureau, we defined earnings as the sum of wages and salaries, farm earnings from self-employment, and non-farm earnings from self-employment. The Census coded each component of earnings in $100 intervals up to $50,000. If an individual reported receiving more than $50,000 from a given source, the Census did not code the exact value. We assigned $70,000 to all such persons. The effect of this assignment procedure depends on the extent to which Race, Education

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[5/] Saben, Samuel, "Occupational Mobility of Employed Workers," Special Labor Force Report No. 84. U.S. Department of Labor, Bureau of Labor Statistics. U.S. Government Printing Office, Washington, D.C. June 1967.

and Experience explain variations in Earnings above $50,000. McClelland (Chapter 6) finds that grouping top earners slightly increases the estimated correlation between Education and Earnings, while leaving the regression coefficient of Education almost unchanged.

12.7 percent of all respondents failed to report one or more kinds of earnings. The Census assigned non-respondents the same earnings as the last male with the same race, age, class of worker, major occupational group, relationship to household head, and number of weeks worked in 1969. Education is not used to allocate earnings, so the effect of education on earnings is underestimated. [6]

Weeks Worked. The Census allocated values to men over 25 who did not report weeks worked on the basis of their race, age, marital status and labor force status. 3.9 percent of our sample did not report weeks worked in 1969.

Univariate Distributions

Table 2 shows the mean and standard deviation of each variable used in our analyses. Sample 1 covers all males in our basic sample, including those with allocated values. Sample 2 treats all allocated values reported by these men as missing data. Sample 3 includes only the 25,697 men with complete data on all items, including not only those listed but also a number of other items listed in the notes to the table. We will use Sample 3 (the "complete data sample") in all our multivariate analyses.

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[6] The original Census tape contained defective income allocation flags. We would like to thank the Census Bureau for making us a new tape that included accurate flags.

Bivariate Relationships.

Table 2A shows correlations for these three samples. Eliminating men with any allocated values raises the observed correlations between education and earnings by about 0.015. If we combine the correlations in Table 2B with the standard deviations in Table 2A, we find that the regression coefficient of education when predicting LnEarnings is 0.0787 when we include everyone, 0.0796 when we exclude men with allocated values on these two items, and 0.0785 when we include only men with complete data. These differences do not seem large enough to justify much concern over the problem of allocated values. The biases for relationships involving other traits are even smaller.

Race Differences

Table 6[7/] shows the mean and standard deviation of education, occupation, and earnings separately by racial group. Schwartz and Williams discuss the implications of these data in more detail in Chapter 8.

Age Differences

Table 7A shows the distribution of education, occupation, and earnings for men of varying ages. Mean Annual Earnings are highest for men between 40 and 45. The standard deviation of Annual Earnings rises faster than the mean between the ages of 25 and 45, so the coefficient of variation

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[7/] We have numbered the tables so as to maintain comparability with other appendices. This means that where the Census does not provide data on a variable covered by other appendices, a table is missing. Tables 3 to 5 in other appendices deal, for example, with background variables not measured in the Census.

increases from 0.502 among 25-29 year olds to 0.752 among 40-44 year olds. But the standard deviation of Ln earnings is almost as high for 25-29 year olds as for 40-44 year olds. This means that the top and bottom of the distribution both gain at the expense of the middle between the ages of 25 and 45. Thus we cannot make any unequivocal judgment about whether earnings become more or less equal between 25 and 45.

Men aged 45-49 earned slightly less than men 40-44, and older men earned still less. This does not mean that the typical worker's earnings decline after he passes 45. If one actually follows a given cohort from 1949 to 1959 or 1959 to 1969, its mean earnings increase, even after correcting for inflation. This means that older workers participate to some extent in general prosperity. But their earnings do not rise fast enough to maintain their advantage over younger workers. In cross sections such as this one, the standard deviation of Annual Earnings remains essentially constant after 45. Since the mean declines, the coefficient of variation increases steadily, reaching a maximum of 0.964 among 60-64 year olds. The standard deviation of Ln Earnings also increases steadily after the age of 45. By any measure, then, inequality increases after the age of 45.

Eta^2 ranges from 0.019 for Earnings to 0.024 for $\text{Earnings}^{1/3}$. This means that between 97.6 and 98.1 percent of the variance in earnings falls within age groups.

Education Differences

Table 9A shows the mean and standard deviation of occupation and earnings for men with varying amounts of education. Except for the aberrant cases of men reporting zero or one year of school, occupation and earnings rise steadily with educational attainment. The progression is not linear, however. Four years of high school increase expected occupational status by 13.9 points and expected earnings by $2087, while four years of college increase expected occupational status by 28.1 points and expected earnings by $4722. The relationship is more nearly linear when we used Ln Earnings as a dependent variable. Four years of high school increase Ln Earnings by 0.315, implying that high school graduates typically earn 37 percent more than those who only finished 8th grade. Four years of college increase Ln Earnings by 0.358, implying that college graduates earn 43 percent more than high school graduates.

The standard deviation of Occupation increases with education up to the second year of college and then declines again. Thus, while the data are clearly heteroscedastic, rescaling does not seem appropriate. The standard deviation of Annual Earnings also increases almost steadily with educational attainment, from about $3200 for men with 1-4 years of schooling to $13,913 for men with 18 or more years of schooling. This increase in the dispersion of Annual Earnings is slower than the increase in the mean up to 12th grade, so the coefficient of variation (V) declines. After that it begins to rise again. V is 0.719 for men with 8 years of school, 0.592 for men with 12 years of school, and 0.687 for men with 16 years of school.[8]

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[8] One should not put too much emphasis on the results for men with 18 or more years of schooling, since a) different members of the group have different amounts of graduate education, and b) many of these individuals are self-employed, and the earnings of the self-employed are seriously underreported. Still, it is interesting that V=0.815 for this group, which indicates that their earnings are less equal than those of all men 25-64 who work (V=0.767).

The standard deviation of Ln Earnings $\left(s_{ln}\right)$ also shows some downward trend as men move from zero to twelve years of schooling, but rises after that.

Table 9B presents the regressions of Occupation, Earnings, Ln Earnings and Earnings$^{1/3}$ on Education. Chapter 12 discussed these equations in some detail, and we will not repeat that discussion here. It is only important to emphasize that the coefficient of Years of Education represents the effect of the "average" year of education, and that the coefficient of Years of Higher Education represents a deviation from this "average" value. The total effect of a year of higher education is thus the sum of the coefficients of Years of Education and Years of Higher Education. The total effect of the 16th year of education is, in turn, the sum of the coefficients of Years of Education, Years of Higher Education, and College Graduation.

Work Experience

Because we excluded men under 25, the only men in our sample with less than ten years of Work Experience have more than eight years of education. Conversely, because we excluded men over 65, the only men in our sample with more than 40 years of Work Experience are those with less than 18 years of education. These restrictions make the bivariate relationship between Earnings and Experience difficult to interpret. One can, however, investigate the relationship between earnings and experience with education controlled.

Table 10A shows that the effects of experience on occupational status are statistically significant but substantively trivial. For Earnings, adding Experience and Experience^2 to the equation raises the coefficient of Years of Education from $502.76 to $583.14. Chapter 12 discusses the reasons for this change, and the danger of taking it at face value. Adding the experience measures also increases the coefficients of Years of Higher Education and B.A. The negative coefficient of Experience^2 implies that the law of diminishing returns applies to experience.

Comparing equation 3 to equation 1, we can see that adding Work Experience and Work Experience^2 boosts R^2 for Annual Earnings from 0.1523 to 0.1917, an increase of 0.0394. The increases for Ln Earnings and Earnings$^{1/3}$ are similar. But this is not an entirely adequate indication of the explanatory power of experience. Equation 3 treats Earnings (or Ln Earnings) as an additive function of Experience and Experience^2. This will only capture the full effect of experience if the value of an extra year of experience is a linear function of the amount of experience a man already has. If the marginal value of additional experience is a non-linear function of his previous experience, we must include higher powers of experience in the equation. Equation 4 shows that Experience^3 has a significant positive coefficient, regardless of whether we predict Annual Earnings, Ln Earnings, or Earnings$^{1/3}$. But this term only raises R^2 by 0.0002 to 0.0004. The positive coefficient of Experience^3 means that the marginal value of an extra year of experience is high at the outset, declines rapidly during the first few years of experience, and then declines more slowly. This appears consistent with Mincer's (1974) findings. Unfortunately, the correlations among Experience, Experience^2, and Experience^3 are extremely high. As a result, one needs an extremely large sample to reduce the sampling errors of the coefficients to manageable size. The Census is the only sample large enough to do this. In order to keep our analyses comparable to other samples we will therefore use only Experience and Experience^2 in subsequent analyses.

Tables 10B, 10C, 10D, and 10E compare the regressions of occupational status and the three earnings' measures for different age groups. Four differences deserve attention.

First, note that the linear effect of education on occupational status appears to be larger for younger men. This could mean either (a) that the effect of education is increasing over time, or (b) that the effect of education declines as men get older. In fact, however, a look at the non-linear equations shows that these equations do not vary significantly by age. The apparent trend in the linear coefficient therefore means only that (c) the variance of education is increasingly variance in higher education, which has more impact on status than elementary or secondary education at all ages.

Second, the relationship between education and earnings is much weaker among men under 35 than among men over 35. This holds both for the absolute size of the coefficients and for the percentage of the total variance explained by education. The coefficients of the education measures become more similar when one controls Work Experience, particularly in the equations that predict Ln Earnings. But R^2 is still much lower for younger men.

Third, since Experience^3 had a positive coefficient in the sample as a whole, Experience and Experience^2 have larger coefficients (one positive, the other negative) in younger samples than in older ones.

Fourth, just as there was no clear trend in overall inequality up to the age of 45, there is no clear trend in unexplained inequality. The standard deviation of the dollar residuals increases with age, but at roughly the same rate as the mean. The standard deviation of the logarithmic residuals does not increase up to 45. After 45, both total inequality and unexplained inequality rise with age.

Table 0: Number of Cases Omitted by Basic Sample Restrictions: 1970 Census 1/1000 Sample (N=71,061)

Restriction (Exclusion Criterion)	Restrictions Applied Cumulatively Sample Size	 Cases Omitted
Total Sample -- Males Aged 14 and over	71,061	
Sex not reported	69,966	1,095
Men under 25, over 64 or not reporting age	41,251	28,715
Students	40,197	1,054
Institutional Population	39,670	527
Military Personnel	38,905	765
Zero or Negative Earners (Basic Sample Size)	36,693	2,212

Table 1: Coding of Questions and Frequencies of Responses for Civilian, Non-Student, Non-Institutional Males Aged 25 to 64 with Positive Earnings: 1970 Census 1/1000 Sample (N=36,693)

Variable Name	Question and Coding			Frequency
Race	Color or Race	White	1	90.8%
		Negro	0	8.0
		All Others	0	1.2
		No Answer (N=379)		100.0%
Non-South Upbringing	Where was this person born?	South	0	31.6%
		Non-South	1	68.4
		No Answer (N=1082)		100.0%
Years of Education	1. What is the highest grade (or years) of regular school he has ever attended? 2. Did he finish the highest grade (or year) he attended?	None	0	.6%
		1	1	.2
		2	2	.4
		3	3	.8
		4	4	1.1
		5	5	1.5
		6	6	2.7
		7	7	3.6
		8	8	10.6
		9	9	6.2
		10	10	7.5
		11	11	5.9
		Finished High School	12	32.1
		One Year College	13	4.1
		Two Years College	14	5.4
		Three Years College	15	1.9
		Four Years College	16	7.8
		Five Years College	17	2.2
		Six or more Years College	19	5.4
		No Answer (N=789)		100.0%
Vocational Training	1. Has this person ever completed a vocational training program? For example, in high school; as an apprentice; in school of business, nursing, or trades; technical institute; or Armed Forces school. 2. What was his main field of vocational training?	No Vocational Training	0	71.7%
		Business, office work	1	4.5
		Nursing, other health fields	1	.6
		Trades and crafts	1	16.3
		Engineering or science technician; draftsman	1	3.6
		Agriculture or home economics	1	1.1
		Other field	1	1.7
		Type of training not specified	1	.4
				100.0%
		No Answer (N=1282)		

Table 1 page two

Age	Month and year of birth	Coded in single years, using age in March 1970.	25-29	14.1%
			30-34	12.9
			35-39	12.8
			40-44	13.9
			45-49	14.1
			50-54	12.7
			55-59	11.1
			60-64	8.5
				100.0%
Work Experience	If Education is less than 8, Experience = Age in 1969 -13 If Education is 8 or more, Experience = Age in 1969 - (Education+6)	Coded in single years, using age in 1969.	1-5	3.4%
			6-10	11.9
			11-15	12.5
			16-20	12.2
			21-25	12.5
			26-30	13.4
			31-35	11.9
			36-40	10.4
			41-45	7.9
			46-50	3.9
		No Answer on Education (N=789)		100.0%
Occupation	Occupation during the last week in March 1970. This is the person's chief job activity or business. If person had more than one job, occupation is the one at which he worked the most hours. What kind of work was he doing? What were his most important activities or duties? What was his job title? For whom did he work? What kind of business or industry was this? Was this person self-employed in his own business, professional practice or farm? Coded as Duncan scores.		0-9	6.4%
			10-19	26.0
			20-29	11.4
			30-39	10.0
			40-49	11.9
			50-59	6.7
			60-69	10.5
			70-79	8.7
			80-89	6.8
			90-96	1.5
		No Answer (N=1948)		100.0%

Table 1 page three

Annual Earnings	Sum of: 1. How much did this person earn in 1969 in wages, salary, commissions, bonuses, or tips from all jobs? (Before deductions for taxes, bonds, dues, or other items) 2. How much did he earn in 1969 from his own non-farm business, professional practice, or partnership? (Net after business expenses. If business lost money, write "loss" above amount) 3. How much did he earn in 1969 from his own farm? (Net after operating expenses. Include earnings as a tenant farmer or sharecropper. If farm lost money, write "loss" above amount)	$1-999	1.9%
		1000-1999	2.5
		2000-2999	2.8
		3000-3999	4.1
		4000-4999	5.3
		5000-5999	7.4
		6000-6999	9.2
		7000-7999	11.1
		8000-8999	10.6
		9000-9999	8.6
		10,000-14,999	24.3
		15,000-19,999	6.6
		20,000-24,999	2.4
		25,000-49,999	2.6
		50,000-100,050	.6
			100.0%

No Answer (N=4673)

This Census coded each question in $100 intervals and assigned the midpoint as the value for the interval, up to $50,000. It grouped all responses over $50,000 into a single category. We coded these responses as $70,000. 1/

Weeks Worked	How many weeks did he work in 1969, either full-time or part-time? Count paid vacation, paid sick leave and military service.	13 or less	7	1.5%
		14-26	20	2.3
		27-39	33	3.9
		40-47	43.5	7.3
		48-49	48.5	6.3
		50-52	51	78.7
				100.0%

No Answer (N=1426)

Notes:

1/ We obtained this estimate from the 1972 Current Population Reports (P-60, No. 90, Dec. 1973), which reported that families with incomes of $50,000 and over had mean income of $70,209. If an individual reported earnings in excess of $50,000 from several sources (e.g. both wages and non-farm self-employment), he was assigned $70,000 for each source. In theory, then, an individual could have earnings of $210,000 ($70,000 in wages, $70,000 from farm self-employment, and $70,000 from some other form of self-employment). In practice, nobody's estimated earnings exceeded $100,050.

Table 2: Means and Standard Deviations of Basic Variables for Civilian, Non-Student, Non-Institutional Males Aged 25 to 64 With Positive Earnings: 1970 Census 1/1000 Sample

Variable	Mean			Standard Deviation		
	All Respondents (Includes Allocated Values) (1)	Respondents Without Allocated Values on the Given Variable (N) (2)	Respondents With No Allocated Values (3)	All Respondents (Includes Allocated Values (1)	Respondents Without Allocated Values on the Given Variable (N) (2)	Respondents With No Allocated Values[1] (3)
Respondent White	.908	.908 (36,314)	.919	.289	.289 (36,314)	.273
Non-South Upbringing	.692	.684 (35,611)	.700	.462	.465 (35,611)	.458
Years of Education	11.425	11.449 (35,904)	11.598	3.558	3.556 (35,904)	3.513
Vocational Training	.306	.283 (35,411)	.290	.461	.540 (35,411)	.454
Age	43.258	43.258 (36,693)	42.935	11.061	11.061 (36.693)	11.004
Work Experience	24.638	24.610 (35,904)	24.168	12.134	12.135 (35,904)	12.068
Work Experience^2	754.273	752.809 (35,904)	729.737	628.809	628.432 (35,904)	618.378
Occupation	NA[2]	39.971 (34,745)	40.795	NA[2]	24.463 (34,745)	24.543
Annual Earnings	9585.24	9608.11 (32,020)	9834.97	7488.84	7365.09 (32,020)	7396.97
Ln Earnings	8.936	8.946 (32,020)	8.981	.757	.743 (32,020)	.716
Earnings$^{1/3}$	20.232	20.281 (32,020)	20.482	4.568	4.499 (32,020)	4.427
Weeks Worked	48.187	48.225 (35,267)	48.418	7.816	7.759 (35,267)	7.419
Ln Weeks Worked	3.848	3.849 (35,267)	3.856	.287	.285 (35,267)	.270
N	36,693	varies	25,697	36,693	varies	25,697

Table 2: Notes

1. In addition to the restrictions noted in the table heading, this sample excludes men allocated values on race, education, weeks worked, hours worked, whether worked in 1969, current occupation, occupation 5 years ago, wage and salary earnings, farm earnings, non-farm business or professional earnings, household relationship, current class of worker, vocational training, disability that limits work and the duration of this disability.

2. The Census coded most men who did not report their occupation into broad occupation groups. We did not assign Duncan scores to these broad occupation groups.

Table 2A: Correlations Among Basic Variables for Civilian, Non-Student, Non-Institutional Males Aged 25 to 64 With Positive Earnings: 1970 Census 1/1000 Sample

		1	2	3	4	5	6	7	8	9	10	11	12	13
. Respondent White	(1)	1.0												
	(2)	1.0												
	(3)	1.0												
. Non-South Upbringing	(1)	.250	1.0											
	(2)	.264	1.0											
	(3)	.252	1.0											
3. Years of Education	(1)	.161	.189	1.0										
	(2)	.159	.198	1.0										
	(3)	.145	.191	1.0										
4. Vocational Training	(1)	.048	.080	.080	1.0									
	(2)	.058	.069	.094	1.0									
	(3)	.055	.069	.082	1.0									
5. Age	(1)	.023	.025	-.219	-.035	1.0								
	(2)	.025	.025	-.218	-.039	1.0								
	(3)	.030	.028	-.214	-.033	1.0								
6. Work Experience	(1)	-.014	-.022	-.453	-.049	.967	1.0							
	(2)	-.011	-.024	-.453	-.056	.967	1.0							
	(3)	-.004	-.020	-.451	-.047	.967	1.0							
7. Work Experience^2	(1)	-.016	-.022	-.446	-.069	.940	.973	1.0						
	(2)	-.014	-.024	-.446	-.077	.940	.973	1.0						
	(3)	-.007	-.017	-.443	-.069	.939	.972	1.0						
8. Occupation	(1)	NA	NA	NA	NA	NA	NA	NA	1.0					
	(2)	.180	.129	.615	.090	-.057	-.218	-.212	1.0					
	(3)	.173	.128	.621	.079	-.056	-.219	-.213	1.0					
9. Annual Earnings	(1)	.147	.127	.361	.040	.046	-.055	-.084	NA	1.0				
	(2)	.141	.135	.371	.050	.047	-.057	-.088	.418	1.0				
	(3)	.135	.133	.375	.042	.059	-.047	-.078	.420	1.0				
10. Ln Earnings	(1)	.191	.159	.370	.083	-.014	-.107	-.138	NA	.758	1.0			
	(2)	.187	.169	.381	.099	-.014	-.110	-.143	.418	.761	1.0			
	(3)	.183	.169	.385	.091	.004	-.096	-.129	.424	.768	1.0			
11. Earnings$^{1/3}$	(1)	.194	.165	.406	.076	.008	-.098	-.131	NA	.897	.960	1.0		
	(2)	.188	.175	.417	.091	.008	-.101	-.136	.463	.899	.960	1.0		
	(3)	.182	.173	.420	.082	.026	-.086	-.122	.467	.903	.961	1.0		
12. Weeks Worked	(1)	.061	.021	.114	.043	-.054	-.076	-.100	NA	.218	.441	.375	1.0	
	(2)	.060	.024	.116	.045	-.052	-.075	-.100	.135	.226	.459	.389	1.0	
	(3)	.062	.022	.108	.038	-.039	[illegible]	-.087	.128	.220	.447	.377	1.0	
13. Ln Weeks Worked	(1)	.050	.019	.102	.041	-.056	-.075	-.097	NA	.201	.441	.362	.965	1.0
	(2)	.051	.022	.105	.042	-.054	-.074	-.098	.117	.208	.459	.376	.965	1.0
	(3)	.051	.019	.096	.036	-.040	-.060	-.084	.110	.203	.447	.365	.964	1.0

Note: 1. The samples in this table correspond to the samples in table 2A. All notes in table 2A also apply here.

Table 6: Respondents' Characteristics by Race for Civilian, Non-Student, Non-Institutional Males Aged 25 to 64 With Positive Earnings: 1970 Census 1/1000 Sample

Race	N in Survey	Years of Education Mean	S.D.	Occupation Mean	S.D.	Annual Earnings Mean	S.D.	Ln Earnings Mean	S.D.	Earnings$^{1/3}$ Mean	S.D.
All	36,693	11.449	3.556	39.971	24.463	9608.11	7365.09	8.946	.743	20.281	4.499
White	32,983	11.629	3.462	41.390	24.360	9929.21	7512.14	8.990	.720	20.525	4.533
Non-White	3,331	9.654	3.952	25.836	20.017	6273.36	4416.58	8.500	.826	17.565	4.060
Black	2,908	9.379	3.817	24.240	18.513	5998.69	4097.09	8.467	.800	17.344	3.911
Other	423	11.495	4.335	36.456	25.655	8018.52	5774.52	8.707	.952	18.970	4.665
NA	379	11.162	3.753	35.268	24.191	8189.93	6154.28	8.760	.804	19.147	4.518
Eta^2 1/		.0285		.0352		.0207		.0359		.0350	
N Reporting Dependent Variable		35,904		34,745		32,020		32,020		32,020	

1/ Eta^2 is calculated over White, Black and Other categories.

Table 7A: Respondent's Characteristics by Age for Civilian, Non-Student, Non-Institutional Males Aged 25 to 64 With Positive Earnings. 1970 Census 1/1000 Sample

Age	N in Survey	Years of Education Mean	S.D.	Occupation Mean	S.D.	Annual Earnings Mean	S.D.	Ln Earnings Mean	S.D.	Earnings$^{1/3}$ Mean	S.D.
All	36,693	11.449	3.556	39.971	24.463	9608.11	7363.09	8.946	.743	20.281	4.499
25-29	5,161	12.399	2.879	40.051	24.087	7632.13	3836.07	8.786	.672	19.095	3.513
30-34	4,752	12.192	3.306	41.537	24.700	9303.99	5490.73	8.977	.646	20.340	3.831
35-39	4,686	12.057	3.544	42.423	25.047	10142.65	6674.70	9.033	.695	20.796	4.279
40-44	5,082	11.575	3.596	41.293	24.615	10691.96	8042.11	9.069	.698	21.063	4.539
45-49	5,171	11.441	3.519	40.467	24.528	10592.86	8488.52	9.036	.740	20.891	4.758
50-54	4,674	10.885	3.545	38.555	23.911	10034.79	8377.17	8.961	.780	20.435	4.845
55-59	4,070	10.330	3.681	37.089	23.852	9503.45	8423.45	8.895	.786	20.014	4.845
60-64	3,107	9.937	3.774	36.669	24.265	8622.35	8312.23	8.728	.910	19.116	5.219
Eta^2		.0491		.0058		.0186		.0223		.0244	
N Reporting Dependent Variable		35,904		34,745		32,020		32,020		32,020	

Table 7B: Regressions of Measures of Success on Age for Civilian, Non-Student, Non-Institutional Males Aged 25 to 64 with Positive Earnings: Complete Data Sample From the 1970 Census 1/1000 Sample (N=25,697)

			Age	Age^2	Constant	R^2	S.D. of Residual
Education	B	(1)	-.06833		14.53201	.0458	3.43114
	(S.E.)		(.00195)				
	B	(2)	.04675	-.00132	12.19213	.0477	3.42787
	(S.E.)		(.01637)	(.00019)			
Occupation	B	(1)	-.12561		46.18765	.0032	24.50452
	(S.E.)		(.01389)				
	B	(2)	.76304	-.01022	28.11923	.0054	24.47711
	(S.E.)		(.11691)	(.00134)			
Annual	B	(1)	39.62		8133.89	.0035	7384.25
Earnings	(S.E.)		(4.19)				
	B	(2)	781.67	-8.54	-6953.74	.0209	7319.60
	(S.E.)		(34.96)	(.40)			
Ln	B	(1)	[.00023]		8.97140	.0000	.71641
Earnings	(S.E.)		(.00041)				
	B	(2)	.08318	-.00095	7.28471	.0232	.70806
	(S.E.)		(.00338)	(.00004)			
Earn-	B	(1)	.01042		20.03435	.0007	4.42590
$ings^{1/3}$	(S.E.)		(.00251)				
	B	(2)	.54972	-.00620	9.06928	.0263	4.36877
	(S.E.)		(.02087)	(.00024)			

Note: Variables in brackets are less than 1.96 times their standard errors.

Table 9A: Respondents' Characteristics by Years of Education for Civilian, Non-Student, Non-Institutional Males Aged 25 to 64 with Positive Earnings: 1970 Census 1/1000 Sample

Years of Education	N in Survey	Occupation Mean	Occupation S.D.	Annual Earnings Mean	Annual Earnings S.D.	Ln Earnings Mean	Ln Earnings S.D.	Earnings$^{1/3}$ Mean	Earnings$^{1/3}$ S.D.
All	36,693	39.971	24.463	9608.11	7365.09	8.946	.743	20.281	4.499
0-7	3,916	20.796	14.088	5817.46	4164.44	8.419	.824	17.104	4.012
0	214	19.137	15.701	5728.30	7455.50	8.295	.890	16.534	4.667
1	72	18.063	14.266	4370.63	3522.87	7.905	1.188	14.916	4.951
2	151	15.757	10.538	4198.47	2681.02	8.034	.982	15.221	3.963
3	280	15.903	10.396	4674.59	3245.31	8.170	.868	15.809	3.953
4	386	18.984	13.565	4860.32	3105.25	8.234	.824	16.092	3.844
5	539	20.636	13.701	5463.70	3340.52	8.347	.880	16.754	3.994
6	983	21.394	14.001	5971.20	3357.93	8.495	.733	17.428	3.665
7	1,291	22.966	14.724	6667.40	4660.48	8.595	.738	18.023	3.874
8	3,793	24.842	15.720	7251.82	5217.06	8.672	.764	18.519	4.032
9-11	7,042	29.681	18.153	8042.68	4765.31	8.828	.670	19.366	3.709
9	2,226	26.879	16.288	7749.59	4886.86	8.781	.682	19.098	3.719
10	2,689	29.814	18.070	8019.66	4329.84	8.840	.640	19.419	3.511
11	2,127	32.451	19.625	8398.76	5110.18	8.863	.691	19.362	3.793
12	11,511	38.754	21.057	9338.63	5525.45	8.997	.603	20.415	3.693
13-15	4,103	52.047	21.615	11206.88	8162.49	9.136	.671	21.489	4.377
13	1,484	48.310	21.423	10735.68	7711.93	9.103	.650	21.233	4.193
14	1,951	52.794	21.722	11244.03	8307.50	9.131	.693	21.485	4.459
15	668	58.144	20.094	12146.66	8582.04	9.221	.645	22.090	4.452
16	2,795	66.864	17.340	14060.70	9664.94	9.355	.638	23.154	4.813
17 & over	2,744	74.152	15.754	16345.86	12771.70	9.450	.778	24.058	5.691
17	802	70.721	16.049	14575.07	9190.73	9.416	.637	23.554	4.583
18+	1,942	75.565	15.415	17075.54	13913.11	9.464	.829	24.265	6.090
NA	789	34.355	21.993	8513.09	4851.23	8.865	.700	19.666	3.977
Eta^2 1/		.4181		.1498		.1477		.1753	
N Reporting Dependent Variable		34,745		32,020		32,020		32,020	

1/ Eta^2 is calculated using single years of education.

Table 9B: Regressions of Measures of Success on Education for Civilian, Non-Student, Non-Institutional Males Aged 25 to 64 With Positive Earnings: Complete Data Sample From the 1970 Census 1/1000 Sample (N=25,697)

Dependent Variable		Years of Education	Years of Education^2	Years of Elementary School	Years of College	Years of Graduate School	Years of Higher Education	High School Graduation	College Graduation	Constant	R^2	S.D. of Residual
Occupation	(1)B	4.33725								-9.50952	.3853	19.24280
	(S.E.)	(.03418)										
	(2)B	-.36551	.20561							14.83966	.4115	18.8295
	(S.E.)	(.14315)	(.00609)									
	(3)B	2.77941		-1.58524	4.11698	[.00108]		3.80079	[.53082]	14.87094	.4236	18.63604
	(S.E.)	(.17710)		(.25698)	(.26684)	(.27589)		(.57587)	(.81986)			
	(4)B	2.93380					2.46519		4.01387	3.51593	.4111	18.83535
	(S.E.)	(.05451)					(.16448)		(.77043)			
Annual Earnings	(1)B	789.75								675.32	.1406	6857.26
	(S.E.)	(12.18)										
	(2)B	-147.95	41.00							5530.41	.1521	6811.58
	(S.E.)	(51.79)	(2.20)									
	(3)B	488.98		[-88.08]	459.01	624.25		[333.02]	757.77	4002.95	.1527	6809.84
	(S.E.)	(64.71)		(93.90)	(97.51)	(100.81)		(210.43)	(299.59)			
	(4)B	502.76					549.61		[542.97]	3335.96	.1523	6811.02
	(S.E.)	(19.71)					(59.48)		(278.59)			
Ln arnings	(1)B	.07849								8.07088	.1481	.66119
	(S.E.)	(.00117)										
	(2)B	.08608	[-.00033]							8.03157	.1482	.6612
	(S.E.)	(.00503)	(.00021)									
	(3)B	.07855		[.00096]	[-.01040]	-.03784		[.01248]	.08456	8.05777	.1491	.66089
	(S.E.)	(.00628)		(.00911)	(.00946)	(.00978)		(.02042)	(.02907)			
	(4)B	.08179					-.02552		.11099	8.04151	.1488	.66096
	(S.E.)	(.00191)					(.00577)		(.02704)			

Table 9B continued

Earn-	(1)B	.52985								14.33728	.1767	4.01735
ings$^{1/3}$	(S.E.)	(.00714)										
	(2)B	.33312	.00860							15.35561	.1781	4.0140
	(S.E.)	(.03052)	(.00130)									
	(3)B	.46197		[-.03265]	[.06858]	[-.04848]		[.13000]	.57073	15.15500	.1788	4.01250
	(S.E.)	(.03813)		(.05533)	(.05745)	(.05940)		(.12399)	(.17652)			
	(4)B	.47431					[.03180]		.66955	14.85766	.1785	4.0130
	(S.E.)	(.01161)					(.03504)		(.16415)			

Notes: Variables shown in brackets are less than 1.96 times their standard error.

The coding of the variables is as follows:

Years of Education = Total Education (0-19)
Years of Higher Education = 0 if Education LE12/Or = Education-12
Years of Elementary School = Education if Education LT8/Or = 8
Years of College = 0 if Education LE12/Or = 4 if Education GE16/Or = Education-12
Years of Graduate School = Education-16 if Education GT16/Or = 0
High School Graduation = 1 if Education GE12/Or = 0
College Graduation = 1 if Education GE16/Or = 0
Where LT = Less Than, LE = Less Than or Equal to, GE = Greater Than or Equal to, GT = Greater Than

Table 10A: Regressions of Measures of Success on Education and Experience for Civilian Non-Student, Non-Institutional Males Aged 25 to 64 with Positive Earnings: Complete Data Sample from the 1970 Census 1/1000 Sample (N=25,697)

Dependent Variable			Years of Education	Years of Higher Education	College Graduation	Experience	Experience^2	Experience^3	Constant	R^2	S.D. of Residual
ccupation	(1)	B	2.93380	2.46519	4.01387				3.51593	.4111	18.83535
		(S.E.)	(.05451)	(.16448)	(.77043)						
	(2)	B	3.17434	2.34329	4.17822	.12769			-2.25812	.4142	18.7858
		(S.E.)	(.05813)	(.16438)	(.76853)	(.01092)					
	(3)	B	3.14441	2.39728	4.20406	.26158	-.00271		-3.23279	.4145	18.7822
		(S.E.)	(.05882)	(.16516)	(.76843)	(.04206)	(.00082)				
	(4)	B	3.13806	2.39456	4.20050	[.13691]	[.00305]	[-.00008]	-2.45696	.4145	18.7821
		(S.E.)	(.05908)	(.16518)	(.76843)	(.11649)	(.00508)	(.00007)			
Annual Earnings	(1)	B	502.76	549.61	[542.97]				3335.96	.1523	6811.02
		(S.E.)	(19.71)	(59.48)	(278.59)						
	(2)	B	669.91	464.90	657.18	88.73			-676.38	.1688	6744.25
		(S.E.)	(20.87)	(59.01)	(275.91)	(3.92)					
	(3)	B	583.14	621.44	732.12	476.90	-7.85		-3502.16	.1917	6650.77
		(S.E.)	(20.83)	(58.48)	(272.10)	(14.89)	(.29)				
	(4)	B	605.51	631.02	744.66	915.90	-28.12	.27	-6234.09	.1958	6634.02
		(S.E.)	(20.87)	(58.34)	(271.42)	(41.15)	(1.80)	(.02)			
Ln Earnings	(1)	B	.08179	-.02552	.11099				8.04151	.1488	.66096
		(S.E.)	(.00191)	(.00577)	(.02704)						
	(2)	B	.09298	-.03119	.11863	.00594			7.77292	.1567	.65789
		(S.E.)	(.00204)	(.00576)	(.02691)	(.00038)					
	(3)	B	.08488	-.01657	.12563	.04220	-.00073		7.50898	.1780	.64954
		(S.E.)	(.00203)	(.00571)	(.02657)	(.00145)	(.00003)				
	(4)	B	.08643	-.01591	.12650	.07268	-.00214	.00002	7.31925	.1801	.64872
		(S.E.)	(.00204)	(.00571)	(.02654)	(.00402)	(.00018)	(.00000)			
Earnings$^{1/3}$	(1)	B	.47431	[.01380]	.66955				14.85766	.1785	4.01301
		(S.E.)	(.01161)	(.03504)	(.16415)						
	(2)	B	.56263	[-.03096]	.72990	.04689			12.73744	.1914	3.98141
		(S.E.)	(.01232)	(.03484)	(.16288)	(.00231)					
	(3)	B	.50706	.06929	.77789	.29548	-.00503		10.92774	.2177	3.9164
		(S.E.)	(.01226)	(.03444)	(.16023)	(.00877)	(.00017)				
	(4)	B	.51921	.07450	.78470	.53394	-.01604	.00014	9.44378	.2210	3.9080
		(S.E.)	(.01229)	(.03437)	(.15989)	(.02424)	(.00106)	(.00001)			

Variables in brackets are less than 1.96 times their standard errors.

Table 10B: Regressions of Occupation on Education and Experience for Civilian, Non-Student, Non-Institutional Males Aged 25 to 64 With Positive Earnings: Complete Data Sample from the 1970 Census 1/1000 Sample, Separately by Age Groups (N=25,697)

Age Group		Years of Education	Years of Higher Education	College Graduation	Experience	Experience^2	Constant	R^2	S.D. of Residual
25-29	B	5.33602					-25.85396	.4050	18.64318
(N=3748)	(S.E.)	(.10568)							
30-34	B	4.82519					-17.20101	.3975	19.21250
(N=3375)	(S.E.)	(.10228)							
35-44	B	4.44772					-10.30686	.4061	19.21103
(N=6963)	(S.E.)	(.06447)							
45-54	B	4.20681					-7.16589	.3644	19.40307
(N=6834)	(S.E.)	(.06722)							
55-64	B	4.08721					-4.70302	.3898	18.77682
(N=4777)	(S.E.)	(.07401)							
25-29	B	3.29638	2.61511	4.59584			-4.39760	.4292	18.26402
	(S.E.)	(.19716)	(.42916)	(1.78623)					
30-34	B	2.84939	2.59497	5.94154			2.73134	.4291	18.70700
	(S.E.)	(.18061)	(.43948)	(1.99573)					
35-44	B	3.04903	2.12241	4.24804			2.94492	.4276	18.86239
	(S.E.)	(.10931)	(.30330)	(1.42055)					
45-54	B	3.13159	1.95093	3.94448			2.63578	.3820	19.13463
	(S.E.)	(.10391)	(.33147)	(1.56566)					
55-64	B	3.14042	2.58801	[1.21969]			3.07080	.4074	18.50663
	(S.E.)	(.10869)	(.42893)	(2.09025)					
25-29	B	2.72248	3.62064	4.69978	1.71093	-.11601	-3.71263	.4305	18.24821
	(S.E.)	(.31796)	(.55538)	(1.78566)	(.66760)	(.04041)			
30-34	B	2.28468	3.79742	5.56324	2.90075	-.11716	-8.39943	.4313	18.67773
	(S.E.)	(.28440)	(.56355)	(1.99591)	(.87757)	(.03328)			
35-44	B	3.06087	2.21293	4.18379	[.30209]	[-.00619]	-.76100	.4277	18.86412
	(S.E.)	(.13579)	(.33180)	(1.42324)	(.45081)	(.01083)			
45-54	B	3.08165	2.09115	3.98919	[.83089]	[-.01356]	-9.40618	.3822	19.13551
	(S.E.)	(.12710)	(.35403)	(1.56645)	(.72648)	(.01164)			
55-64	B	3.12929	2.89539	[1.07194]	[2.15690]	[-.02547]	-42.17974	.4079	18.50316
	(S.E.)	(.13152)	(.45700)	(2.09168)	(1.11430)	(.01332)			

Variables in brackets are less than 1.96 times their standard errors.

Table 10C: Regressions of Annual Earnings on Education and Experience for Civilian, Non-Student, Non-Institutional Males Aged 25 to 64 with Positive Earnings: Complete Data Sample from the 1970 Census 1/1000 Sample, Separately by Age Groups (N=25,697)

Age Group		Years of Education	Years of Higher Education	College Graduation	Experience	Experience^2	Constant	R^2	S.D. of Residual
25-29	B	343.84					3439.92	.0718	3563.17
(N=3748)	(S.E.)	(20.20)							
30-34	B	591.10					2149.70	.1216	5137.29
(N=3375)	(S.E.)	(27.35)							
35-44	B	880.96					135.58	.1787	6745.24
(N=6963)	(S.E.)	(22.64)							
45-54	B	1012.75					-850.37	.1700	7813.77
(N=6834)	(S.E.)	(27.07)							
55-64	B	951.59					-338.06	.1722	7659.09
(N=4777)	(S.E.)	(30.19)							
25-29	B	466.62	-208.88	[22.46]			2153.23	.0753	3557.40
	(S.E.)	(38.40)	(83.59)	(347.92)					
30-34	B	497.96	[191.66]	[-142.25]			3083.70	.1230	5134.95
	(S.E.)	(49.57)	(120.63)	(547.82)					
35-44	B	516.38	512.35	1355.55			3592.10	.1955	6677.00
	(S.E.)	(38.69)	(107.36)	(502.85)					
45-54	B	614.13	598.05	2239.46			2791.62	.1908	7716.68
	(S.E.)	(41.90)	(133.68)	(631.41)					
55-64	B	547.65	1254.99	[-437.77]			2971.19	.1979	7541.18
	(S.E.)	(44.29)	(174.78)	(851.75)					
25-29	B	509.61	225.41	[125.95]	1024.23	-47.63	-3480.92	.0954	3519.41
	(S.E.)	(61.32)	(107.11)	(344.39)	(128.76)	(7.79)			
30-34	B	565.36	[299.70]	[-182.53]	[305.61]	[-7.09]	-514.48	.1243	5132.70
	(S.E.)	(78.15)	(154.87)	(548.48)	(241.16)	(9.15)			
35-44	B	563.83	730.98	1196.34	729.00	-14.45	-5701.20	.2000	6659.06
	(S.E.)	(47.93)	(117.13)	(502.40)	(159.14)	(3.82)			
45-54	B	590.49	662.49	2259.84	[382.25]	[-6.25]	-2728.55	.1910	7716.79
	(S.E.)	(51.26)	(142.77)	(631.70)	(292.97)	(4.69)			
55-64	B	439.99	1045.32	[-272.39]	-1246.32	13.00	33267.73	.2020	7523.25
	(S.E.)	(53.48)	(185.81)	(850.46)	(453.07)	(5.42)			

Variables in brackets are less than 1.96 times their standard errors.

Table 10D: Regressions of Ln Earnings on Education and Experience for Civilian, Non-Student, Non-Institutional Males Aged 25 to 64 With Positive Earnings: Complete Data Sample from the 1970 Census 1/1000 Sample Separately by Age Groups (N=25,697)

Age Group		Years of Education	Years of Higher Education	College Graduation	Experience	Experience^2	Constant	R^2	S.D. of Residual
25-29	B	.04566					8.23730	.0412	.63496
(N=3748)	(S.E.)	(.00360)							
30-34	B	.06715					8.17292	.1243	.57636
(N=3375)	(S.E.)	(.00307)							
35-44	B	.08242					8.09719	.1864	.61505
(N=6963)	(S.E.)	(.00206)							
45-54	B	.09206					7.99641	.1926	.65836
(N=6834)	(S.E.)	(.00228)							
55-64	B	.09080					7.94146	.1676	.74303
(N=4777)	(S.E.)	(.00293)							
25-29	B	.09362	-.08311	[.01763]			7.73485	.0585	.62937
	(S.E.)	(.00679)	(.01479)	(.06155)					
30-34	B	.08135	-.03597	[.06283]			8.03107	.1269	.57568
	(S.E.)	(.00556)	(.01352)	(.06142)					
35-44	B	.08223	-.03229	.19841			8.10079	.1885	.61433
	(S.E.)	(.00356)	(.00988)	(.04627)					
45-54	B	.09210	-.03314	.20506			7.99820	.1943	.65775
	(S.E.)	(.00357)	(.01139)	(.05382)					
55-64	B	.07942	[.01807]	[.09753]			8.03557	.1702	.74202
	(S.E.)	(.00436)	(.01720)	(.08381)					
25-29	B	.09506	[-.02413]	[.03080]	.13481	-.00651	7.05919	.0690	.62601
	(S.E.)	(.01091)	(.01905)	(.06126)	(.02290)	(.00139)			
30-34	B	.08415	[-.01464]	[.05543]	.05633	[-.00171]	7.55180	.1286	.57530
	(S.E.)	(.00876)	(.01736)	(.06148)	(.02703)	(.00103)			
35-44	B	.08842	-.02287	.19067	.03127	[-.00051]	7.60150	.1907	.61358
	(S.E.)	(.00442)	(.01079)	(.04629)	(.01466)	(.00035)			
45-54	B	.08930	-.02859	.20622	[.02766]	[-.00047]	7.63127	.1945	.65776
	(S.E.)	(.00437)	(.01217)	(.05385)	(.02497)	(.00040)			
55-64	B	.06020	[.01234]	[.11117]	[-.00232]	[-.00026]	8.78367	.1777	.73879
	(S.E.)	(.00525)	(.01825)	(.08352)	(.04449)	(.00053)			

Variables in brackets are less than 1.96 times their standard errors.

Table 10E: Regressions of Earnings$^{1/3}$ on Education and Experience for Civilian, Non-Student, Non-Institutional Males Aged 25 to 64 with Positive Earnings Complete Data Sample from the 1970 Census 1/1000 Sample, Separately by Age Groups (N=25,697)

Age Group		Years of Education	Years of Higher Education	College Graduation	Experience	Experience^2	Constant	R^2	S.D. of Residual
25-29	B	.28691					15.63392	.0587	3.31099
(N=3748)	(S.E.)	(.01877)							
30-34	B	.44044					15.04424	.1458	3.44739
(N-3375)	(S.E.)	(.01835)							
35-44	B	.57044					14.31446	.2198	3.83890
(N=6963)	(S.E.)	(.01288)							
45-54	B	.63782					13.69021	.2218	4.17187
(N=6834)	(S.E.)	(.01445)							
55-64	B	.61721					13.57803	.2093	4.40511
(N-4777)	(S.E.)	(.01736)							
25-29	B	.50811	-.38511	[.09147]			13.31654	.0702	3.28839
	(S.E.)	(.03550)	(.07727)	(.32161)					
30-34	B	.46932	[-.09629]	[.26859]			14.75755	.1462	3.44763
	(S.E.)	(.03328)	(.08099)	(.36781)					
35-44	B	.48028	[-.02860]	1.27830			15.17787	.2250	3.82646
	(S.E.)	(.02217)	(.06153)	(.28818)					
45-54	B	.54952	[-.02648]	1.48241			14.50732	.2274	4.15747
	(S.E.)	(.02258)	(.07202)	(.34018)					
55-64	B	.47656	.35526	[.36661]			14.73427	.2186	4.37984
	(S.E.)	(.02572)	(.10151)	(.49469)					
25-29	B	.53198	[-.02582]	[.17474]	.83587	-.03950	8.89390	.0873	3.26216
	(S.E.)	(.05684)	(.09928)	(.31921)	(.11934)	(.00722)			
30-34	B	.50012	[.02581]	[.22549]	.32808	[-.00933]	11.68904	.1481	3.44492
	(S.E.)	(.05245)	(.10394)	(.36813)	(.16186)	(.00614)			
35-44	B	.51854	[.05830]	1.21090	.28904	-.00523	11.00445	.2282	3.81913
	(S.E.)	(.02749)	(.06718)	(.28814)	(.09127)	(.00219)			
45-54	B	.53057	[.01046]	1.49277	[.22227]	[-.00373]	11.45203	.2277	4.15733
	(S.E.)	(.02761)	(.07692)	(.34032)	(.15783)	(.00253)			
55-64	B	.37121	.28932	[.45869]	[-.25242]	[.00138]	23.90867	.2253	4.36215
	(S.E.)	(.03101)	(.10774)	(.49312)	(.26270)	(.00314)			

Variables in brackets are less than 1.96 times their standard errors.

Table 13A: Regression of Education on Background Characteristics for Civilian, Non-Student, Non-Institutional Males Aged 25 to 64 with Positive Earnings: Complete Data Sample from the 1970 Census 1/1000 Sample (N=25,697)

Dependent Variable	White	Other Race	Non-South Up-bringing	Foreign Born	White x Non-South Up-bringing	Age	Age^2	Constant	R^2	S.D. of Residual
Education B	1.76254	1.13016	2.04996	1.26910	-.74546	.03999	-.00126	8.58314	.1055	3.32246
(S.E.)	(.09732)	(.24786)	(.18698)	(.09398)	(.19308)	(.01588)	(.00018)			

1. The squared and interaction terms are not orthogonalized.

Table 14A: Regression of Occupation on Background Characteristics, Education and Experience for Civilian, Non-Student, Non-Institutional Males Aged 25 to 64 with Positive Earnings: Complete Data Sample from the 1970 Census 1/1000 Sample (N=25,697)

		(1)		(2)		(3)		(4)	
	r	B (S.E.)	Beta	B (S.E.)	Beta	B (S.F.)	Beta	B (S.E.)	Beta
White	.173	16.00974 (.70407)	.178	9.64896 (.55178)	.107	9.43887 (.55091)	.105	-12.34885 (2.61306)	-.138
Other Race	-.014	8.49567 (1.79306)	.037	3.18511 (1.39434)	.014	2.97635 1.39142	.013	[2.23524] (1.38495)	[.010]
Non-South Upbringing	.128	8.40808 (1.35187)	.157	[1.27110] (1.05653)	[.024]	[1.37560] (1.05423)	[.026]	3.51535 (1.06003)	.066
Foreign Born	.020	4.22372 (.67845)	.039	[.14604] (.53426)	[.001]	[.18516] (.53331)	[.002]	[.50560] (.52582)	[.005]
White x Non-South Upbringing	.141	-3.84691 (1.39569)	-.074	[-1.23085] (1.08666)	[-.024]	[-1.50662] (1.08466)	[-.029]	-3.94083 (1.09334)	-.075
Years of Education	.621			2.75170 (.05621)	.394	2.94131 (.06078)	.421	2.51670 (.29073)	.360
Years of Higher Education	.587			2.64828 (.16431)	.216	2.58961 (.16510)	.211	3.19057 (.43033)	.260
College Graduation	.538			3.87295 (.76474)	.058	4.04046 (.76321)	.061	8.41858 (1.08222)	.127
Work Experience	-.219					.24923 (.04176)	.123	.71984 (.22706)	.354
Work Experience^2	-.213					-.00278 (.00082)	-.070	-.00795 (.00373)	-.200
Vocational Training 1/	.079			+		+		[.09087] (.31346)	[.002]
Engineering Training	.144			+		+		11.91040 (.65410)	.092
Business Training	.129			+		+		10.45282 (.60358)	.089
Agricultural Training	-.039			-		-		-7.25267 (1.20001)	-.029
Nursing Training	.048			[+]		[+]		3.45945 (1.44907)	.011
Other Training	.029			[+]		[+]		2.53082 (.93779)	.013

Table 14A continued

	r	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
White x Education	.544			+		+		1.74138 (.17145)	.326
White x Higher Education	.578			[+]		[+]		-2.20044 (.36116)	-.17[illegible]
White x Experience	-.095					-		.47237 (.15281)	.256
White x Experience^2	-.138					-		-.00699 (.00291)	-.177
Education x Experience	.152					-		-.06771 (.01450)	-.366
Education x Experience^2	.006					-		.00077 (.00023)	.192
Higher Education x Experience^2	.394					[-]		.00165 (.00037)	.078
College Graduation x Experience^2	.352					-		-.00586 (.00167)	-.051
Constant		18.69893		-3.64388		-9.52996		-5.43918	
R^2		.0410		.4207		.4234		.4440	
S.D. of Residual		24.03730		18.68260		18.64102		18.30996	

Notes

1. The correlation is the zero-order correlation between vocational training and occupation where vocational training is a 1/0 variable. The coefficient of vocational training in these regressions estimates the effect of having completed a trade or not specified type of training program.
2. Coefficients in brackets are less than 1.96 times their standard errors.
3. Variables denoted by signs indicate the sign of the coefficient if this variable was the next entered in the equation.
4. The squared and interaction terms are not orthogonalized.

Table 15A:Regressions of Earnings on Background Characteristics, Education, Experience and Occupation for Civilian, Non-Studen
Non-Institutional Males Aged 25 to 64 with Positive Earnings: Complete Data Sample from the 1970 Census 1/1000 Sampl
(N=25,697)

		(1)		(2)		(3)		(4)		(5)		(6)	
	r	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
White	.135	3119.49 (187.06)	.115	2147.81 (174.93)	.079	1937.43 (171.23)	.072	-2746.35 (932.23)	-.101	[-1752.01] (909.06)	[-.065]	[-742.94] (908.75)	[-.027]
Other Race	-.020	1456.71 (465.70)	.021	[228.83] (432.99)	[.003]	[211.19] (423.17)	[.003]	[825.86] (427.80)	[.012]	[441.29] (417.11)	[.006]	[494.60] (415.02)	[.007]
Non-South Upbringing	.133	1730.90 (104.92)	.107	946.43 (99.32)	.059	886.96 (97.30)	.055	886.67 (96.36)	.055	908.29 (93.93)	.056	895.23 (93.04)	.056
Foreign Born	.012	965.16 (205.64)	.030	[351.05] (193.44)	[.011]	[278.64] (189.13)	[.009]	[365.22] (187.72)	[.011]	[329.64] (182.97)	[.010]	[299.61] (181.21)	[.009]
Years of Education	.375			419.58 (20.32)	.199	493.73 (21.54)	.235	395.40 (65.89)	.188	264.29 (64.32)	.126	413.36 (66.04)	.196
Years of Higher Educ.	.362			627.75 (59.49)	.170	699.97 (58.56)	.190	[-318.40] (199.02)	[-.086]	-617.67 (194.16)	-.167	-1908.74 (249.02)	-.517
College Graduation	.330			[528.57] (276.98)	[.026]	714.93 (270.76)	.036	[-1544.37] (871.39)	[-.077]	-2427.36 (849.69)	-.121	[490.74] (1167.97)	[.025]
Work Experience	-.047					475.03 (14.82)	.775	[53.91] (54.18)	[.088]	[53.04] (52.81)	[.087]	[-86.85] (55.98)	[-.142]
Work Experience^2	-.078					-7.94 (.29)	-.664	[.18] (.98)	[.015]	[-.05] (.96)	[-.004]	2.43 (1.00)	.203
Vocational Training 1/	.042			+		+		332.34 (103.28)	.020	[152.74] (100.78)	[.009]	253.36 (99.98)	.016
Engineering Training	.067			+		+		835.67 (229.09)	.022	[67.82] (224.27)	[.002]	[188.86] (222.22)	[.005]
Agriculture Training	-.023			-		-		-1692.05 (426.22)	-.022	-947.85 (415.93)	-.013	-983.44 (411.83)	-.013

Table 15A continued

	r	(1) B (S.E.)	Beta	(2) B (S.E.)	Beta	(3) B (S.E.)	Beta	(4) B (S.E.)	Beta	(5) B (S.E.)	Beta	(6) B (S.E.)	Beta
Nursing Training	.050			+		+		1859.26 (515.28)	.020	1754.62 (502.25)	.019	1335.95 (497.72)	.015
Other Training	-.001			-		-		-1041.62 (331.83)	-.018	-1066.48 (323.44)	-.018	-964.63 (320.28)	-.017
Type of Training Not Specified	-.011			-		-		-1264.71 (632.49)	-.011	-1357.74 (616.50)	-.012	-1456.55 (610.38)	-.013
White x Education	.350			+		+		153.16 (60.25)	.095	[18.86] (58.84)	[.012]	[4.36] (59.92)	[.003]
White x Higher Educ.	.365			+		+		326.33 (128.38)	.087	496.91 (125.22)	.132	[200.60] (133.23)	[.053]
White x Experience	.031					[-]		270.10 (54.38)	.485	236.89 (53.01)	.426	156.75 (53.01)	.282
White x Experience^2	-.027					-		-4.69 (1.03)	-.395	-4.24 (1.01)	-.357	-3.07 (1.01)	-.259
Education x Experience^2	.085					[-]		-.08 (.03)	-.070	[-.06] (.03)	[-.050]	-.16 (.04)	-.130
Higher Educ. x Experience	.400					+		56.60 (17.79)	.304	57.63 (17.34)	.310	40.42 (17.58)	.217
Higher Educ. x Experience^2	.344					+		[-.78] (.43)	[-.121]	-.90 (.42)	-.140	[-.63] (.42)	[-.098]
College Graduation x Exper.	.361					+		272.17 (97.63)	.271	302.37 (95.17)	.301	[178.73] (94.51)	[.178]
College Graduation x Exper.^{2}	.310					+		-5.98 (2.33)	-.172	-6.19 (2.27)	-.178	[-4.29] (2.25)	[-.123]
No Disability that limits work	.075							2065.57 (181.86)	.063	1933.65 (177.30)	.059	1908.42 (175.55)	.058
Occupation	.420									79.33 (2.16)	.263	-51.60 (12.04)	-.171

Table 15A continued

	r	(1) B (S.E.)	Beta	(2) B (S.E.)	Beta	(3) B (S.E.)	Beta	(4) B (S.E.)	Beta	(5) B (S.E.)	Beta	(6) B (S.E.)	Beta
Occupation x White	.415									+		[17.48] (9.14)	[.062]
Occupation x Higher Educ.	.391									+		26.99 (2.26)	.546
Occupation x College Grad.	.359									+		-25.99 (12.93)	-.095
Occupation X Experience	.335									+		6.24 (.76)	.603
Occupation x Experience^2	.210									+		-.08 (.01)	-.292
Constant		4827.04		1249.83		-5097.12		-1358.35		-1620.40		109.36	
R^2		.0297		.1634		.2010		.2200		.2590		.2738	
S.D. of Residual		7286.89		6766.67		6613.18		6536.17		6370.85		6307.26	

Notes: 1. The correlation is the zero-order correlation between vocational training and earnings, where vocational training is a 1/0 variable. The coefficient of vocational training in these regressions estimates the effects of having completed a trade or business training program.

2. Coefficients in brackets are less than 1.96 times their standard errors.

3. Variables denoted by signs indicate the sign of the coefficient if this variable was the next entered in the equation.

4. Only those interactions and vocational training dummies that were statistically significant in the step they were entered are reported.

5. The squared and interaction terms are not orthogonalized.

Table 16A: Regressions of Ln Earnings on Background Characteristics, Education, Experience, Occupation, Ln Weeks Worked and Ln Hours Worked for Civilian Non-Student, Non-Institutional Males Aged 25 to 64 with Positive Earnings: Complete Data Sample from the 1970 Census 1/1000 Sample (N=25,697)

		(1)		(2)		(3)		(4)		(5)		(6)	
	r	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
White	.183	.44967 (.02043)	.171	.32236 (.01927)	.123	.31100 (.01896)	.118	[.10792] (.06283)	[.041]	[.04945] (.06092)	[.019]	[.08656] (.06079)	[.033]
Other Race	-.024	.15908 (.05203)	.024	[.08483] (.04871)	[.013]	[.07920] (.04789)	[.012]	[.07878] (.04754)	[.012]	[.05712] (.04609)	[.009]	[.05488] (.04591)	[.008]
Non-South Upbringing	.169	.30804 (.03923)	.197	.14567 (.03691)	.093	.15106 (.03629)	.097	.35571 (.05209)	.228	.38541 (.05050)	.247	.35218 (.05073)	.225
Foreign Born	.016	.12576 (.01969)	.040	[.01501] (.01866)	[.006]	[.01029] (.01836)	[.003]	.04380 (.01827)	.014	.04039 (.01771)	.013	.03623 (.01766)	.011
White x Non-South Upbringing	.181	-.10661 (.04050)	-.070	[-.03377] (.03796)	[-.022]	[-.04079] (.03733)	[-.027]	[-.04630] (.03709)	[-.030]	[-.02702] (.03596)	[-.018]	[-.02677] (.03584)	[-.018]
Years of Education	.385			.07103 (.00196)	.348	.07258 (.00209)	.356	.09758 (.00451)	.478	.07429 (.00441)	.364	.09987 (.00510)	.490
Years of Higher Educ.	.297			-.01588 (.00574)	-.044	[-.00626] (.00568)	[-.018]	-.03413 (.01002)	-.095	-.05197 (.00972)	-.145	-.13642 (.01271)	-.361
College Graduation	.273			.11023 (.02671)	.057	.12444 (.02627)	.064	-.21180 (.07033)	-.109	-.30950 (.06821)	-.159	-.25637 (.06808)	-.132
Work Experience	-.096					.04196 (.00144)	.707	.01902 (.00519)	.320	.01853 (.00503)	.312	.02072 (.00501)	.349
Work Experience^2	-.129					-.00075 (.00003)	-.645	[-.00008] (.00009)	[-.065]	[-.00012] (.00009)	[-.103]	[-.00012] (.00009)	[-.107]
Vocational Training 1/	.091			+		+		.09187 (.01072)	.058	.09064 (.01039)	.057	.08856 (.01037)	.056
Engineering Training	.076			+		+		.05734 (.02247)	.015	-.04319 (.02192)	-.011	[-.02288] (.02190)	[-.006]
Business Training	.042			[+]		[+]		-.04539 (.02072)	-.013	-.13393 (.02021)	-.039	-.11522 (.02021)	-.0

Table 16A Continued

	(7) B (S.E.)	Beta	(8) B (S.E.)	Beta	(9) B (S.E.)	Beta	(10) B (S.E.)	Beta	(11) B (S.E.)	Beta
White	[.05204] (.05505)	[.020]	[.06324] (.05678)	[.024]	[.05299] (.05671)	[.020]	[.07732] (.06008)	[.029]	[.08056] (.06005)	[.031]
Other Race	[.05894] (.04158)	[.009]	[.07970] (.04296)	[.012]	[.07214] (.04291)	[.011]	[.04974] (.04538)	[.007]	[.05090] (.04536)	[.008]
Non-South Upbringing	.35432 (.04595)	.227	.34878 (.04707)	.223	.34543 (.04700)	.221	.35752 (.05014)	.229	.35384 (.05012)	.226
Foreign Born	[.01832] (.01600)	[.006]	[.02321] (.01651)	[.007]	[.02232] (.01649)	[.007]	[.02909] (.01746)	[.009]	[.02914] (.01745)	[.009]
White x Non-South Upbringing	[-.3620] (.03246)	[-.024]	[-.05141] (.03352)	[-.034]	[-.05040] (.03347)	[-.033]	[-.03937] (.03542)	[-.026]	[-.03641] (.03541)	[-.024]
Years of Education	.07895 (.00463)	.387	.07783 (.00408)	.382	.07696 (.00408)	.377	.09373 (.00505)	.460	.09333 (.00504)	.458
Years of Higher Educ.	-.10586 (.01152)	-.296	[-.01217] (.00906)	[-.034]	[-.01234] (.00905)	[-.034]	-.12796 (.01256)	-.358	-.13049 (.01257)	-.365
College Graduation	-.16960 (.06167)	-.087	-.13298 (.06356)	-.068	[-.12410] (.06347)	[-.064]	-.16465 (.06746)	-.085	-.14264 (.06757)	-.073
Work Experience	.01333 (.00454)	.225	.01133 (.00469)	.191	.01094 (.00468)	.184	.01039 (.00497)	.175	.01059 (.00497)	.178
Work $Experience^2$	[-.00007] (.00008)	[-.057]	[-.00002] (.00009)	[-.013]	[-.00001] (.00009)	[-.007]	[-.00001] (.00009)	[-.006]	[-.00001] (.00009)	[-.008]
Vocational Training 1/	.08540 (.00939)	.054	.08737 (.00969)	.055	.08810 (.00967)	.056	.09105 (.01025)	.058	.09163 (.01024)	.058
Engineering Training	[-.01854] (.01983)	[-.005]	.05117 (.02031)	.014	.05262 (.02028)	.014	[-.01925] (.02164)	[-.005]	[-.02425] (.02165)	[-.006]
Business Training	-.11001 (.01830)	-.032	-.04904 (.01873)	-.014	-.05062 (.01870)	-.015	-.10982 (.01997)	-.032	-.11265 (.01997)	-.033

Table 16A continued

	(12) B (S.E.)	(12) Beta	(13) B (S.E.)	(13) Beta	(14) B (S.E.)	(14) Beta
White	.22769 (.01845)	.087	.20926 (.01657)	.080	.27621 (.01694)	.105
Other Race	[.05429] (.04634)	[.008]	[.05517] (.04160)	[.008]	[.07569] (.04277)	[.011]
Non-South Upbringing	.13552 (.03511)	.087	.15877 (.03152)	.102	.16901 (.03241)	.108
Foreign Born	[.01193] (.01778)	[.004]	[-.00205] (.01596)	[-.001]	[.00305] (.01641)	[.001]
White x Non-South Upbringing	[-.02715] (.03612)	[-.018]	[-.04668] (.03243)	[-.031]	[-.05840] (.03334)	[-.038]
Years of Education	.04615 (.00214)	.226	.03665 (.00192)	.180	.05614 (.00191)	.275
Years of Higher Educ.	-.02491 (.00554)	-.070	[-.00554] (.00498)	[-.015]	.01342 (.00510)	.037
College Graduation	.09442 (.02553)	.049	.08692 (.02292)	.045	.12682 (.02354)	.065
Work Experience	.03929 (.00139)	.662	.03099 (.00126)	.522	.03233 (.00129)	.545
Work Experience^2	-.00071 (.00003)	-.614	-.00053 (.00002)	-.461	-.00054 (.00003)	-.470
Vocational Training 1/	.08937 (.01054)	.057	.08544 (.00946)	.054	.08692 (.00973)	.055
Engineering Training	[-.04183] (.02227)	[-.011]	[-.03404] (.01999)	[-.009]	.05276 (.02043)	.014
Business Training	-.13809 (.02053)	-.040	-.12754 (.01843)	-.037	-.05116 (.01884)	-.015

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Table 1cA continued

	r	(1) B (S.E.)	Beta	(2) B (S.E.)	Beta	(3) B (S.E.)	Beta	(4) B (S.E.)	Beta	(5) B (S.E.)	Beta	(6) B (S.E.)	Beta
Agricultural Training	-.029			-		-		-.26786 (.04127)	-.036	-.20597 (.04004)	-.028	-.20545 (.03988)	-.028
Other Training	.005			[-]		[-]		-.12530 (.03224)	-.022	-.14578 (.03126)	-.026	-.13572 (.03115)	-.024
Type of Training not Specified	-.005			[-]		[-]		-.12401 (.06109)	-.011	-.15100 (.05922)	-.014	-.14677 (.05900)	-.013
White x College Graduation	.277			+		[+]		.10883 (.05417)	.055	.10464 (.05251)	.053	[.07156] (.05242)	[.036]
White x Experience	.016					-		.02142 (.00523)	.397	.01825 (.00507)	.339	.01705 (.00505)	.316
White x Experience^2	-.056					-		-.00044 (.00010)	-.385	-.00037 (.00010)	-.322	-.00038 (.00010)	-.328
Non-South Upbringing x Educ.	.272			-		-		-.01919 (.00388)	-.165	-.02377 (.00376)	-.205	-.02039 (.00379)	-.176
Non-South Upbring. x Higher Ed.	.266			-		-		.01580 (.00736)	.040	.02145 (.00713)	.055	.01458 (.00716)	.037
Education x Experience^2	.045					-		-.00002 (.00000)	-.172	-.00002 (.00000)	-.151	-.00003 (.00000)	.247
Higher Educ. x Exper.^{2}	.263					+		.00003 (.00001)	.056	.00002 (.00001)	.040	.00003 (.00001)	.044
College Graduation x Exper.	.286					+		.02929 (.00393)	.301	.03305 (.00381)	.340	.03233 (.00380)	.333
College Graduation x Exper.^{2}	.239					+		-.00067 (.00011)	-.198	-.00070 (.00010)	-.209	-.00073 (.00010)	-.217
No Disability that limits work	.156							.43843 (.01753)	.138	.42389 (.01699)	.134	.42369 (.01693)	.134
Occupation	.424									.00844 (.00021)	.289	.01226 (.00139)	.420

Table 16A continued

	(7) B (S.E.)	Beta	(8) B (S.E.)	Beta	(9) B (S.E.)	Beta	(10) B (S.E.)	Beta	(11) B (S.E.)	Beta
Agricultural Training	-.20085 (.03612)	-.027	-.25454 (.03730)	-.035	-.26474 (.03726)	-.036	-.20203 (.03942)	-.027	-.19954 (.03940)	-.027
Other Training	-.11819 (.02821)	-.021	-.10905 (.02914)	-.019	-.10911 (.02909)	-.019	-.12335 (.03079)	-.022	-.12508 (.03078)	-.022
Type of Training not Specified	-.16649 (.05344)	-.011	[-.09461] (.05521)	[-.009]	[-.09654] (.05513)	[-.009]	-.13042 (.05831)	-.012	-.13125 (.05828)	-.012
White x College Graduation	[.03371] (.04748)	[.017]	[.06968] (.04895)	[.035]	[.06624] (.04888)	[.034]	[.08072] (.05181)	[.041]	[.08109] (.05178)	[.041]
White x Experience	.01605 (.00458)	.298	.01993 (.00473)	.370	.01995 (.00472)	.370	.01726 (.00499)	.320	.01664 (.00499)	.309
White x Experience^2	-.00032 (.00009)	-.281	-.00038 (.00009)	-.328	-.00038 (.00009)	-.326	-.00038 (.00009)	-.327	-.00036 (.00009)	-.317
Non-South Upbringing x Educ.	-.01928 (.00343)	-.166	-.01754 (.00351)	-.151	-.01723 (.00350)	-.148	-.02010 (.00375)	-.173	-.02000 (.00374)	-.172
Non-South Upbringing x Higher Educ.	.01419 (.00648)	.036	.01452 (.00665)	.037	.01476 (.00664)	.038	[.01376] (.00707)	[.035]	[.01317] (.00707)	[.034]
Education x Experience^2	-.00002 (.00000)	-.198	-.00001 (.00000)	-.119	-.00001 (.00000)	-.118	-.00003 (.00000)	.219	-.00003 (.00000)	-.214
Higher Educ. x Experience^2	.00002 (.00001)	.037	.00003 (.00001)	.049	.00003 (.00001)	.050	.00003 (.00001)	.051	.00003 (.00001)	.051
College Graduation x Exper.	.02678 (.00344)	.276	.02389 (.00355)	.246	.02360 (.00355)	.243	.02193 (.00379)	.226	.01900 (.00383)	.196
College Graduation x Exper.^{2}	-.00062 (.00009)	-.185	-.00056 (.00010)	-.167	-.00056 (.00010)	-.165	-.00052 (.00010)	-.153	-.00045 (.00010)	-.133
No Disability that limits work	.21763 (.01558)	.069	.22149 (.01609)	.070	.21642 (.01608)	.068	.39112 (.01678)	.123	.39197 (.01677)	.124
Occupation	.00862 (.00126)	.295					.01211 (.00137)	.415	.01163 (.00137)	.399

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Table [illegible] continued

	(12) B (S.E.)	Beta	(13) B (S.E.)	Beta	(14) B (S.E.)	Beta
Agricultural Training	-.20480 (.04069)	-.028	-.20065 (.03653)	-.027	-.25402 (.03753)	-.035
Other Training	-.14215 (.03176)	-.025	-.12449 (.02851)	-.022	-.10589 (.02932)	-.019
Type of Training not Specified	-.15985 (.06018)	-.015	-.12466 (.05403)	-.011	[-.09940] (.05556)	[-.009]
White x College Graduation						
White x Experience						
White x Experience^2						
Non-South Upbringing x Educ.						
Non-South Upbringing x Higher Educ.						
Education x Experience^2						
Higher Educ. x Experience^2						
College Graduation x Exper.						
College Graduation x Exper.^{2}						
No Disability that limits work						
Occupation	.00849 (.00021)	.291	.00730 (.00019)	.250		

Table 16A continued

		(1)		(2)		(3)		(4)		(5)		(6)	
	r	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
Occupation x Education	.431									[+]		-.00063 (.00011)	-.372
Occupation x Higher Educ.	.316									+		.00174 (.00017)	.364
Occupation x Experience^2	.180									+		.00000 (.00000)	.121
Ln Weeks Worked	.447												
Ln Hours Worked	.179												
No Occupation 5 Years Ago	-.145												
Same Occup. 5 Years Ago	.137												
Occupation 5 Years Ago	.404												
Constant		8.30351		7.76191		7.28234		6.77144		6.85565		6.65084	
R^2		.0522		.1705		.1982		.2275		.2741		.2798	
S.D. of Residual		.69751		.65260		.64162		.62999		.61069		.60834	

Table [illegible]

	(7)		(8)		(9)		(10)		(11)	
	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
Occupation x Education	-.00040 (.00010)	-.239					-.00061 (.00011)	-.359	-.00065 (.00011)	-.383
Occupation x Higher Educ.	.00148 (.00015)	.308					.00163 (.00017)	.340	.00169	.352
Occupation x Experience^2	.00000 (.00000)	.126					.00000 (.00000)	.114	.00000 (.00000)	.103
Ln Weeks Worked	.98928 (.01319)	.372	1.03139 (.01358)	.388	1.00464 (.01390)	.378				
Ln Hours Worked					.10561 (.01203)	.045				
No Occupation 5 Years Ago							-.24278 (.01587)	-.092	-.24701 (.01589)	-.093
Same Occup. 5 Years Ago							.12037 (.00863)	.081	.11527 (.00869)	.078
Occupation 5 Years Ago									.00155 (.00031)	.050
Constant	3.41255		3.35045		3.08272		6.84247		6.83101	
R^2	.4092		.3692		.3711		.2967		.2974	
S.D. of Residual	.55096		.56930		.56846		.60116		.60088	

Notes: 1. The correlation is the zero-order correlation between earnings and ln earnings, where vocational training is a 1/0 variable. The coefficient of vocational training in these regressions estimates the effect of having completed a trade, business or nursing training program.

2. Coefficients in brackets are less than 1.96 times their standard errors.

3. Variables denoted by signs indicate the sign of the coefficient if this variable was the next entered in the equation.

4. Only those interactions and vocational training dummies that were statistically significant in the step they were entered are reported.

5. The squared and interaction terms are not orthogonalized.

Table 10A Continued

	(12) B (S.E.)	Beta	(13) B (S.E.)	Beta	(14) B (S.E.)	Beta
Occupation x Education						
Occupation x Higher Educ.						
Occupation x Experience^2						
Ln Weeks Worked			1.03060 (.01311)	.388	1.07096 (.01344)	.403
Ln Hours Worked						
No Occupation 5 Years Ago						
Same Occup. 5 Years Ago						
Occupation 5 Years Ago						
Constant	7.36904		3.63315		3.42501	
R^2	.2498		.3954		.3606	
S.D. of Residual	.62070		.55724		.57302	

Table - -Regressions of Earnings on Background Characteristics, Education, Experience and Occupation for Civilian, Non-Student, Non-Institutional Males Aged 25 to 64 with Positive Earnings: Complete Data Sample from the 1970 Census 1/1000 Sample (N=25,697)

		(1)		(2)		(3)		(4)		(5)		(6)	
	r	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
White	.182	2.57003 (.11063)	.158	1.86220 (.10241)	.115	1.75558 (.10017)	.108	.99916 (.25696)	.062	.95085 (.24767)	.059	.85014 (.24896)	.052
Other Race	-.024	1.37288 (.27542)	.033	.54800 (.25347)	.013	.53952 (.24755)	.013	.69669 (.24736)	.017	[.39737] (.23851)	[.010]	[.43145] (.23697)	[.011]
Non-South Upbringing	.173	1.33314 (.06205)	.138	.73792 (.05814)	.076	.71847 (.05692)	.074	1.29742 (.18556)	.134	1.41335 (.17887)	.146	1.40474 (.17811)	.146
Foreign Born	.017	.79324 (.12162)	.041	[.18677] (.11324)	[.010]	[.13160] (.11064)	[.007]	.27734 (.10984)	.014	.26283 (.10587)	.013	.24031 (.10526)	.012
Years of Education	.420			.40743 (.01190)	.323	.43198 (.01260)	.343	.47048 (.03141)	.373	.34204 (.03042)	.271	.47138 (.03359)	.374
Years of Higher Educ.	.354			.07449 (.03483)	.034	.13294 (.03426)	.060	-.38046 (.05037)	-.172	-.52998 (.04867)	-.240	-1.06587 (.07414)	-.482
College Graduation	.325			.66262 (.16214)	.055	.76824 (.15839)	.064	.82041 (.15651)	.068	.53629 (.15098)	.045	.48966 (.15028)	.041
Work Experience	-.086					.29400 (.00867)	.801	.24022 (.01219)	.655	.21836 (.01176)	.595	.14250 (.01915)	.388
Work Experience^2	-.122					-.00511 (.00017)	-.714	-.00302 (.00022)	.422	-.00289 (.00021)	-.404	-.00159 (.00032)	-.222
Vocational Training 1/	.082			+		+		.45351 (.05942)	.047	.32457 (.05734)	.033	.35375 (.05706)	.036
Engineering Training	.082			+		+		.52407 (.13312)	.023	[-.00579] (.12886)	[-.000]	[.08912] (.12825)	[.004]
Agricultural Training	-.029			-		-		-1.54782 (.24816)	-.034	-1.02556 (.23948)	-.023	-1.04250 (.23792)	-.023

Table 17A continued

		(1)		(2)		(3)		(4)		(5)		(6)	
	r	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
Other Training	.003			-		-		-.76535 (.19309)	-.022	-.78172 (.18611)	-.022	-.72762 (.18492)	-.021
Type of Training Not Specified	-.008			[-]		[-]		-.83500 (.36837)	-.012	-.90218 (.35505)	-.013	-.91504 (.35274)	-.013
White x Education	.403			+		+		.07755 (.02377)	.080	[.03151] (.02293)	[.033]	[.04352] (.02301)	[.045]
Non-South Upbringing x Educ.	.294			-		-		-.05246 (.01558)	-.073	-.06128 (.01502)	-.085	-.06155 (.01496)	-.086
Education x Experience^2	.065					-		-.00011 (.00002)	-.155	-.00010 (.00002)	-.134	-.00016 (.00002)	-.222
Higher Educ. x Experience	.378					+		.04507 (.00432)	-.405	.04919 (.00417)	.442	.03401 (.00498)	.306
Higher Educ. x Experience^2	.320					+		-.00075 (.00012)	-.196	-.00085 (.00011)	-.223	-.00063 (.00012)	-.163
No Disability that limits work	.130							2.21331 (.10592)	.113	2.12327 (.10211)	.108	2.11204 (.10146)	.108
Occupation	.467									.05505 (.00124)	.305	.03507 (.00923)	.194
Occupation x Education	.484									+		-.00263 (.00069)	-.252
Occupation x Higher Educ.	.377									+		.01262 (.00101)	.426
Occupation x Experience	.351									+		.00236 (.00043)	.382

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Table [illegible]

	(1)		(2)		(3)		(4)		(5)		(6)		
	r	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
Occupation x Experience^2	.210									+		-.00002 (.00001)	-.142
Constant		16.42086		13.15957		9.58437		7.33765		7.75876		8.06903	
R^2		.0526		.1997		.2367		.2607		.3132		.3223	
S.D. of Residual		4.30958		3.96121		3.86861		3.80832		3.67060		3.64649	

Notes:
1. The correlation is the zero-order correlation between vocational training and earnings$^{1/3}$, where vocational training is a 1/0 variable. The coefficient of vocational training in these regressions estimates the effect of having completed a trade, business or nursing training program.
2. Coefficients in brackets are less than 1.96 times their standard errors.
3. Variables denoted by signs indicate the sign of the coefficient if this variable was the next entered in the equation.
4. Only those interactions and vocational training dummies that were statistically significant in the step they were entered are reported.
5. The squared and interaction terms are not orthogonalized.

APPENDIX B: THE 1962 SURVEY OF "OCCUPATIONAL CHANGES IN A GENERATION" BY GREGORY A. JACKSON

The Census Bureau has been concerned with the relationship between educational attainment and subsequent economic status since the late 1930's. The Bureau did not investigate the relationship between family background and economic success until the early 1960's. It conducted its first survey of what it called "Occupational Changes in a Generation" (OCG) in March, 1962, at the instigation of Peter Blau and Otis Dudley Duncan. This was the first large-scale study of social mobility in the United States. Duncan was also the first investigator to see the usefulness of describing the relationship between family background, educational attainment, and economic success using recursive equations. As a result, Blau and Duncan's (1967) analysis of the OCG has become the reference point for almost all subsequent sociological research on these issues.

The two most important previous analyses of these data are Blau and Duncan's 1967 volume and Duncan, Featherman, and Duncan's followup, completed in 1968 but not published commercially until 1972. These analyses were all conducted without direct access to the data tapes. The investigators had to tell the Census Bureau what tabulations they wanted and then wait many months to obtain the results. This placed a great premium on using simple analytic models. Experimentation with alternative specifications was extremely difficult. Partly as a result, Duncan and his co-workers relied largely on linear, additive models. Many of their most important analyses were confined to the white men of non-farm origin.

It was not until 1972 that the OCG data became available to other investigators, and more complex and experimental approaches to the data became technically feasible.

The original OCG was supposed to be repeated every ten years, but the first replication was not in fact conducted until 1973. This replication was directed by David Featherman and Robert Hauser of the University of Wisconsin. The Census Bureau has not yet made the data from OCG II available to other investigators, so this chapter deals exclusively with the 1962 survey.[1]

My analyses follow conventions developed specifically for this project. They therefore differ from prior analyses of the 1962 OCG in two respects. First, I explore possible non-linearities and interactions in the determinants of economic success more sytematically than previous analyses. I also provide somewhat more detailed information on the effects of eliminating various kinds of non-respondents. Second, because my tabulations conform to the c[illegible]ventions developed by this project, they provide a baseline for assessing the re[illegible]ctiveness of the samples discussed in later appendiees.

THE SAMPLE

The 1962 OCG was conducted in two stages. The Current

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[1] Readers interested in comparing the two surveys should see David L. Featherman and Robert M. Hauser, "Sexual Inequalities and Socioeconomic Achievement in the U.S., 1962-1973." _American Sociological Review_, June 1976, 41: 462-483, and "Changes in the Socioeconomic Stratification of the Races, 1962-1973." _American Journal of Sociology_, (Nov. 1976) 82: 621-651

Population Survey obtained information on the sex and race of all persons living in a probability sample of 35,000 U.S. households in March, 1962. The interviewers then left a questionnaire dealing with family background for each of the 25,000-odd males between the ages of 20 and 64 in these households. Each man was asked to fill out the questionnaire and mail it back to the Census Bureau. After several followups, five-sixths of these men (N=20,700) actually returned the questionnaires. The Census Bureau then merged the data obtained from this questionnaire with data on age, race, education, and occupation obtained in the CPS regular March interview and with income data from the February survey. This means that data on age, education occupation, and income may come from the respondent's wife or from another "responsible" household member. Income data were only available for five-sixths of the respondents, because CPS did not ask income in March. CPS uses a revolving sample, replacing a sixth of the respondents every month, so five-sixths of all March respondents had been asked their income in the February survey.

The OCG survey covered the civilian non-institutional population, including members of the armed forces living off post or on military posts in families. The sample I used for this analysis was a subset of Blau and Duncan's sample. First, I excluded 2,081 men 20 to 24 years of age. Second, I eliminated 168 men who reported zero income for 1961. This yielded a basic sample of 18,451 individuals, including 4,336 who did not report income because they were not in the sample in February. 2/

2/ Due to an error, I did not eliminate the 114 men who reported being in the armed forces.

The CPS stratifies its samples by geographic area. To adjust for this, it weights each individual by the number of population members he or she represents. 3/

We standardized these weights to a mean of 1.00. All references in the remainder of this chapter are to weighted numbers of cases.

VARIABLES

The Census coded father's occupation using its own three-digit code. Father's Occupation is the Duncan score. Father White Collar is a 1/0 dichotomy based on the Census' broad classifications. White collar workers include professional, technical and kindred workers, managers and administrators (except farm), sales workers and clerical and kindred workers. Blue collar workers include craftsmen and kindred workers, operatives, laborers (except farm), service workers, and private household workers. We separated farmers, farm managers, laborers and foreman for some analyses. They received a 0 on Father White Collar.

Respondents reported their father's education in one of eight categories. I recoded these values as the midpoint of each category, except for the category of 1-4 years of schooling. I assigned a value of 3 to this group. I assigned men with five or more years of college a value of 18.

The OCG asked respondents to report the occupation of their father or the person who was head of their family. Father's Education also referred to the educational attainment of the family head. 9.8 percent of the men in our complete data sample reported the occupation of someone other than their father. 12.2 percent reported the educational attainment of someone other than their father. Including these responses should not seriously affect the analyses. Jencks shows in Chapter 12 that the effects of father's occupation and education on all measures of success are similar to the effects of mother's, other female's, or other male's occupation and education.

continued on 4a

3/ CPS weights supposedly compensate for the sampling design and for non-response to the OCG questionnaire. They range from 83 to 9981, with a mean of 2081 and a standard deviation of 1302.

Race was assessed by the CPS interviewer as "white", "Negro", or "other".

Siblings was the number of brothers plus the number of sisters the respondent reported, except that when either exceeded 9 the Census rounded it to 9. Thus the maximum for Siblings was 18.

The classification of respondents as having "farm" or "non-farm" backgrounds posed a problem. Blau and Duncan based their classification on the father's occupation. But appreciable numbers of individuals live on farms even though they no longer engage primarily in farming. Fourteen percent of those who said they lived on farms at 16 listed their father's occupation as non-agricultural.

In order to measure the effects of ruralism, we relied on the question "Where were you living when you were 16 years old?" One possible answer to this question was "On a Farm." Another possible response was "In the same community as at the present time." In this case, if the respondent reported that he currently lived on a farm I assumed he had lived on a farm when he was 16. This underestimates the percentage of men living on farms at 16, since appreciable numbers of men have moved off farms while staying in the same community. 39 percent of those whose fathers were engaged in agriculture when they were 16 ended up being classified as non-farm using this procedure. Unfortunately, this only became clear after all my tabulations were complete. In retrospect, it would probably have been wiser to adopt Blau and Duncan's approach of equating a father in agriculture with farm residence.

The Census coded Education into eight categories like those for Father's Education. I recoded both variables identically.

I estimated Experience in 1961 from Age in 1962 and Education. The Experience variable took the value Age-(Education+6) or Age-13, whichever was smaller.

Occupation was the respondent's Duncan score.

Income represents the respondent's 1961 income from all sources. The CPS coded income into seventeen categories. It grouped men who reported negative total income in the $1-$499 category.

The treatment of missing data depended on the question. The Census Bureau coded questions that were part of the regular CPS interview, i.e. Race, Age, Education, Occupation and Income, using its usual procedures. These procedures allocated values to all missing responses, except for Occupation.[4]

The data tape does not identify such allocations, so I could not eliminate them. The Census Bureau did not allocate values to individuals who failed to answer questions on the supplemental OCG questionnaire. Missing data on these items were therefore treated as such.

4/ Information concerning the allocation procedures is incomplete. The CPS allocated respondents who did not report the highest grade of school **attended** the same value as the last individual processed of the same color and age. It allocated a value for whether the highest grade was completed on the basis of the individual's age and highest grade **attended**. The CPS assigned income non-respondents the same value as the last person processed of similar age, sex, family status, color, urban-rural residence, weeks worked and major occupation group. The CPS did not report the number of men with allocated incomes in 1961, but it was probably similar to the 9 to 11 percent allocated in 1963. See U.S. Bureau of the Census, *Current Population Reports*, Series P-20, No. 121, "Population Characteristics", U.S. Government Printing Office, Washington, D. C. February 7, 1963, (pp 1-6) and U.S. Bureau of the Census, *Current Population Reports*, Series P-60, No. 39, "Consumer Income", U.S. Government Printing Office, Washington, D. C. February 28, 1963 (pp 6-14)

UNIVARIATE DISTRIBUTIONS

Table 1 presents questions, weighted frequency distributions and coding for the major variables, computed on the basic sample of males 25 to 64 years of age who either had non-zero income or were not asked their income.

These data were gathered eight years earlier than those described in the preceding appendix, which makes comparison difficult. Most of the distributions are reasonable. The OCG men are on the average poorer and less well educated than the men in the 1970 Census.

The remainder of the analysis uses two different subsamples. The sample described in Table 1 includes men aged 25 to 64 with non-zero income. Tables 3A through 9A use this sample, and treat missing data as a separate category. Tables 2B through 9B, 2C, 2D, and 10 through 17 cover only men who had data on all of the variables in the analysis.[5] I will describe this restricted sample as having "complete data on all variables." The only exception to this criterion is the 392 men who were missing data on Father's Education and 671 men with missing data on Father's Occupation and who reported no father at home when they were 16. I assigned these men the mean on Father's Education and Father's Occupation and kept them in the complete data subsample.

Table 2 presents the means and standard deviations of the basic variables for the full sample, the complete data sample and the partial data sample. The partial data sample is the men excluded from the complete data sample but included in the full sample. The most striking difference between the men with and without complete data is their average Income. The men with incomplete data are, on average, poorer than those with complete data. The standard deviation of their incomes is smaller, which suggests that they are clustered around the lower end of the income distribution. Their incomes are also more unequally distributed. The pattern for Occupation and Education is similar, though less marked. This must be partly due to the fact that the partial data group is on the average older than the complete data sample. Moreover, the statistics for Occupation and Education include some men who in fact had zero income but were not asked to report their income.

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[5] I did not exclude men who did not report who they were living with at age 16. I assumed they were not living with their father.

The complete and partial data groups look considerably more similar when we turn to variables from the mailback OCG questionnaire. Men who failed to report Father's Education or Father's Occupation were included in the complete data sample only if they also reported that their father was absent when they were 16. This partly explains the higher proportion of father absent men in the complete data sample.

Since 19 percent of all men who were asked their income lack complete data, the differences between the full sample and the complete data sample are relatively modest. The major potential problem is that respondents who did not report on their father are poorer than average which limits our ability to estimate downward mobility.

Table 2A presents the correlations for the three samples. In general, the differences are small.

We are looking at the OCG data principally to estimate the influence of background factors on economic success. I will proceed

in two steps. First, I will examine the bivariate relation between each background factor and various measures of success. I will also examine nonlinearities in these relationships.
Second, I will use these bivariate relationships to structure a multivariate analysis of the impact of different background factors on economic success. This multivariate analysis will include not only significant quadratic terms from the bivariate analyses but significant two-way multiplicative interactions among the background variables.
As a more general test for nonadditivity, I will also split the sample by race, class background and age and re-estimate the regression equations within these subsamples.

BIVARIATE RELATIONSHIPS

Table 3A gives means and standard deviations for several measures of success by categories of Father s Education. When the mean of the dependent variable increases in direct proportion to the increase in Father's Education, the relationship is linear. Equal standard deviations at all levels of Father's Education indicate that the relationship is homoscedastic. The relationship between Father's Education and respondent's Education is thus almost linear. It is homoscedastic for men whose fathers had 8 or more years of schooling.An additional year of Father's Education is associated with about 0.4 additional years of Education. Table 3B shows this same relationship for the complete data sample using a regression equation. The simple linear model again yields an estimated increase of 0.4 years of Education for each year of Father's Education.

Eta^2 estimates the proportion of variance in Education that lies between categories of Father's Education. R^2 for equation l is the proportion of variance in Education that is explained by a linear equation involving Father's Education. There are two reasons why eta^2 exceeds R^2. 1) The sample coverage and treatment of missing data are different in the two tables. 2) Education is not a perfect linear function of Father's Education, at least when both are measured in years and in the CPS categories. We could recode Education to remedy this, but since years seems a reasonable and natural metric, and since we have no assurance that our recoded variable would predict all outcomes better than the present coding, we have chosen the alternative of fitting a simple non-linear model that includes the square of Father's Education as an independent variable. In addition, we entered a dummy variable for father absence. This is intended to compensate for any error introduced by assigning the mean level of Father's Education to men who did not report this item because they had no father at home.

Adding these two variables raises R^2 to almost the same level as eta^2. This suggests that this equation successfully accounts for most of the variance of Education that lies between categories of Father's Education . The substantive importance of the squared term is not great, however.

The large coefficient of Father Absent (-1.12173) merits comment. For the regression analysis, I assigned men whose fathers were not at home a value of 7.7 for Father's Education if they did not report it. All linear regression equations assume that men with the average value on the independent variable (i.e. men whose fathers got 7.7 years of Education), if otherwise typical, should get the average value on the dependent variable (i.e 10.7 years of Education). Yet the

Table 3A mean for men missing Father's Education data is only 8.981, or 1.8 years below the mean. This value includes some men who had a father at home but failed to report his education. When we exclude these men, the discrepancy falls, but it does not disappear entirely. This suggests that assigning the mean to men who had no father at home will bias our results. The inclusion of Father Absent in the regressions adjusts for this error, and keeps the coefficients of the other variables in the equation essentially independent of the assignment procedure. It does not tell us, however, whether men with no fathers at home at 16 had poorly educated fathers or whether they had typical fathers but suffered from not having these fathers at home. One could perhaps probe this question using the small sample of men who reported their father's education but said he was not at home when they were 16 Since these men are not typical of men with no father at home, we did not do this.

Occupation is almost homoscedastic with respect to Father's Education for men whose fathers had 8 or more years of schooling. Table 3A shows that years of Father's Education up to the tenth grade are associated with differences of about 2 points on the Occuation Scale. Years of Father's Education beyond the tenth grade are associated with differences of about 3 points. The eta^2 is 0.113 yet the linear model in Table 3B only explains 10.3 percent of the variance. When Father's Education^2 and Father Absent are included in the equation for Occupation, R^2 rises to 0.116, exceeding eta^2.

There are two possible explanations. 1) Tables 3A and 3B are based on slightly different samples. 2) Some men who reported no father at home at age 16 knew and reported their father's education. To the extent that Father Absent differentiates these men from others, it explains variance that is within categories of Father's Education. This could cause R^2 in the equation that includes Father Absent to be higher than the eta^2 obtained from the analysis of variance.

Aside from this disparity in explanatory power, the two tables yield similar findings. We estimated from Table 3A that an extra year of Father's Education had an effect about 1 Duncan point more per year for years after the tenth grade than for years before the tenth grade. The complete regression yields estimates of 0.58718 + (2) (8) (0.00105) = 2.04398 for the eighth year and 0.58718 + (2) (12) (0.00105) = 2.77238 for the twelfth. These numbers are compatible with the crude estimates from Table 3A since the latter weighted categories equally and the regression weighted them by their size, which is greatest around 8.

Income is much less clearly related to Father's Education. Father's Education explains only 5.5 percent of the variance in Income. When data are heteroscedastic, as in the case here, a regression line gives a "best" fit only in a restricted statistical sense. Table 3B suggests that the relationship of Income to Father's Education is adequately explained by a quadratic form, since the R^2 of 0.059 exceeds eta^2. However, these values of R^2 and eta^2 are so small that the differences are almost meaningless in substantive terms.

One explanation of the non-linearity and heteroscedasticity of Income in Tables 3A and 3B may be that dollars are an improper metric. Increases in Father's Education do not lead to uniform increments in dollars, but they may lead to uniform increments in some transformed measure of Income. The natural logarithm of Income yields relatively interpretable coefficients, analogous to elasticities in a fully multiplicative model. The cube root of Income minimizes heteroscedasticity, and has some empirical support as a direct measure of the utility, or value, of Income.

Table 3A shows that both transformations yield approximately homoscedastic fits. Moreover, both are more linearly related to Father's Education than Income. The quadratic term in the Ln Income equation accounts for a statistically insignificant amount of variance.

The overall implications of Tables 3A and 3B are not surprising. Father's Education has a limited impact on Education, Occupation, Income and its transformations. Its effects are larger at higher levels of Father's Education, but not severely so. Moreover, it has less impact for outcomes later in the respondent's life.

Tables 4A and 4B use Father's Occupation as the independent variable. Father's Occupation is a two-digit Duncan score, equivalent to nearly 100 categories. The regressions in Table 4B are computed using this essentially continuous measure while the analysis of variance in Table 4A is based on ten broader categories. To the extent that fine gradations of Father's Occupation have explanatory power, the eta^2's from Table 4A will underestimate the impact of Father's Occupation on the outcome variables. As a result, eta^2 no longer sets a maximum for R^2. Nor does comparing eta^2 to R^2 give as good an indication of the importance of non-linearities.

The patterns in Tables 4A and 4B are similar to those in Tables 3A and 3B. Since a father's occupation presumably impinges more directly on the respondent than a father's education, it is not surprising that the R^2's are consistently higher than those in Table 3B. Linear equations appear to do quite well. The inclusion of

Father's Occupation^2 and Father Absent never increases R^2 by more than about 0.01. However, only in the case of Income is the squared term's coefficient statistically insignificant. A one-point increase in Father's Duncan score is worth less at the top of the scale than at the bottom for all outcomes.

Tables 5A and 5B give analysis of variance and regression using the number of Siblings as the independent variable. Since men with no father at home were able to report on this variable, I did not assign non-respondents a value or enter Father Absent in the regressions. In Table 5A, I grouped men with over ten siblings together, while in Table 5B I used the actual value, up to the maximum of 18. Thus eta^2 and R^2 are not strictly comparable.

Both tables suggest that siblings have a small but significant nonlinear effect on Education. Table 5A shows that the second sibling reduces Education by 0.66 years while the eighth reduces it by 0.35 years. Siblings^2 has the expected positive sign in table 5B, and raises R^2 from 0.110 to 0.116.

A similar pattern obtains for Occupation, although the net impact is smaller. The second sibling reduces Occupation by 4.7 points, the eighth by 1.2 points. The inclusion of a squared term raises R^2 by 0.0045 from 0.0688 to 0.0733.

Education, Ln Income and Income$^{1/3}$ are relatively homoscedastic with respect to Siblings. Occupation and Income show more variation among men from small families than among men from large families.

All of the Income measures show a somewhat non-linear relationship to Siblings. The R^2 increments due to the squared term range from 0.001 for Ln Income to 0.002 for Income. I therefore retained the squared term for the miltivariate analysis.

Table 6 presents means and standard deviations by racial categories for the outcome measures. Blacks have 3 years less Education than whites, score 21.5 points lower on Occupation and have Incomes $3200 lower than whites. Men classified as "other" fall between blacks and whites.

Race explains only to 7.1 percent of the variance in outcomes. The pattern of these statistics is of interest, however. The background factors I have considered thus far, had less effect as men got older, and further removed from their parental environment. Here the situation is reversed. Race has its smallest impact on Education and its largest impact on transformed Income (the findings for Income are complicated by the heterogeneity of within-category variance, which is four times greater for whites than for blacks). This suggests that Race operates less as a background factor than as a direct influence on later outcomes. This is hardly surprising, since skin color remains visible throughout one's lifetime.

Race explains about twice as much of the difference in all measures of success in the OCG than in the 1970 Census. The Black and White means are also more similar in the Census. This suggests that between 1961 and 1969, whites and blacks became more alike on our measured outcomes.

Tables 7A and 7B show the characteristics of different age groups. Average educational attainment in the U.S. has been increasing. Table 7A shows that for men aged 30 to 64 (or born between 1897 and 1931), the effect of being born a year later was to increase eventual Education by an average of 0.08 years. The effect is less for men under 30, but the observed mean for this group may have underestimated their eventual mean, since some of them were still in school in 1962. Table 7B is consistent with this. Age^2 increases R^2 by only 0.001. These results are essentially consistent with those reported by Bartlett and Jencks for the 1970 Census.

The effect of Age on Occupation is negligible. Eta^2 is 0.004 and R^2, even with the squared term, is 0.0025. The R^2 increment due to the squared term is immaterial, given the absolute size of R^2, but it is noteworthy that R^2 remains lower than eta^2. This implies that Age per se has virtually no net effect on Occupation but that what effect it has is not adequately described by a quadratic regression model.

The relationship of Age to Income is murkier still. Men 35 to 49 years of age have essentially the same mean Income, between $6300 and $6400. Younger and older men earn less. This accounts for the relatively strong effect of the squared terms in Table 7B. Even so, age explains no more than 2 percent of the variance in any Income variable. The incomes of men under 35 are less variable than those between 35 and 49, though the variation among men over 49 remains high. This implies that the rise to the $6300 Income level is more uniform across individuals than the decline from it.

Age explains slightly more variation in Occupation and Earnings in the 1970 Census than in the OCG, though the proportion explained is still small.

Table 9A shows the occupational status and income of men with varying amounts of Education. Education is clearly more than a device for transmitting the effects of measured background variables, for its explanatory power is much too large. Since the categories in this table are those available from the survey, eta^2 is a good measure of the maximum R^2 (except, of course, for the difference in samples). 41 percent of the variation in Occupation lies between Education categories. The Cube Root of Income explains the maximum amount of variance, i.e. 19 percent.

In the 1970 Census data the three education variables (coded in single years) explained about 15 percent of the variance in 1969 earnings (coded in $100 increments up to $50,000). Table 9B shows that when Education is grouped in eight categories and Income in 17, Education explains 16.6 percent of the variance in Income. Education also explains more of the variance in Occupation, Ln Income and Income$^{1/3}$ in the OCG than the Census. This difference is not surprising. In Chapter 16, McClelland shows that Education explains very little of the variation in Income above about twice the mean. Such variation is excluded in a grouping process. The value of R^2 therefore rises.

Table 10 shows the effects of education and experience on our measures of success. The OCG did not measure experience directly, so

I estimated Experience in 1961 as Age-Education-6.

For each measure of success, the inclusion of Experience and Experience^2 increase R^2 by a small amount. The Education coefficients also increase. In Table 9B, four years of college increased the average Duncan score of Occupation by 4 x (2.70056 + 3.07854) + 5.16318 = 28.27958 points. From Table 10 we see that this is better specified as a 4 x (3.05790 + 2.93567) + 5.26687 = 29.24115 point increase for Education less 4 x (0.10464 + 0.00200) = 0.42656 points for foregone Experience, for a net increase of 29.24115 - 0.42656 = 28.81459 points. The difference between these two estimates of Education's net effect derives from the fact that education is negatively correlated with Age while occupation is positively corellated with Age. The **bivariate** regression of Occupation on Education therefore understates the effect of Education . The effect with Age controlled is identical to the net effect with Experience controlled.

The overall conclusions from these bivariate analyses are that

(1) the effects of family background are usually well enough described by a simple linear form of the measured variable, and that a quadratic term suffices to capture remaining non-linearities.

(2) Race and Age effects are more complex.

(3) Education is most usefully described by a three-variable spline function with Experience and Experience^2 included in the model. The variance of Income in each analysis was positively correlated with the category mean, but the **transformations of Income were relatively** homoscedastic.

The only markedly heteroscedastic relationships in the OCG were those involving untransformed Income. This was also true for the Census. Yet the degree of heteroscedasticity is not directly comparable, since the OCG grouped incomes higher than $25,000 while grouping for Census started at $50,000. In addition, and more serious, mean OCG Income was $5828 in 1961 while mean Census earnings were $9391 in 1969. To compare heteroscedasticity directly we would need to inflate OCG or deflate Census figures by an appropriate factor. Alternatively, we can plot category standard deviations by category means using any categorizing variable, and see if the resulting relationships look similar. Figure 1 and 2 present such plots for the Census and the OCG, using Education categories. After taking account of scale differences, the plots are remarkably similar. I carried out the inflation analyses and obtained similar results. Thus, the pattern of Income heteroscedasticity is similar in the OCG and the Census surveys.

The tables I have considered yield similar findings. Moreover, the findings are comparable with the more limited Census data, when allowances are made for time and coding differences. The next step is to integrate these variables into a multivariate model.

MULTIVARIATE RELATIONSHIPS

The analysis reported in this section is framed by two questions left unanswered by the bivariate analysis. (1) To what extent does Education actually affect Occupation and Income, and to what extent are Education, Occupation, and Income associate simply because individuals from privileged backgrounds not only get more education but enter high-status occupations and earn more? (2) To what extent do background factors influence outcomes directly, and to what extent through mediating variables like Education and Experience?

The analyses are constructed to answer the second question straightforwardly. I start from a model in which background factors influence outcome measures directly. I then add mediating variables like Education and see how the background variables coefficients change. To the extent that they are reduced, the effects observed in the first step are mediated by the variables entered in the second.

To answer the first question, I will measure the effect of, say, education on various outcomes. I will then add the background characteristics. The decrease in the coefficient of education measures the extent to which the association between education and success is due to their joint positive association with background factors.

The sort of recursive analysis we have just described is usually called path modeling. However, we will allow for non-linearities and interactions among variables' effects. There is no simple way to portray such findings in a path diagram. Nonetheless, we will present results in tables giving standardized regression coefficient as well as unstandardized coefficients and standard errors.

To facilitate comparison with other analyses in this project, we have required that certain variables be included in the equations even if they fail to account for a statistically significant proportion of variance. Coefficients less than 1.96 times their standard error are bracketed. For other variables, the criterion for inclusion is that the coefficient be 1.96 times its standard error. Since the data are weighted, random sampling should produce such coefficients for somewhat more than 5 percent of all variables even if their true coefficients were zero.

One further bit of explanation is necessary before we present the tables. We have chosen to transform all nonlinear and interaction variables, except the Education splines, to orthogonal forms. The intent of this is to reduce the multicollinearity among the independent variables, which can otherwise lead to numerical instability in the estimates obtained. An added benefit is that the standardized coefficients are more easily interpretable since the linear coefficients do not usually change when an orthogonal squared or interaction term enters an equation. One cannot, however, use the equations to calculate the marginal value of a unit change in a given variable unless one knows the size of linear coefficients used to calculate the orthogonal terms.
These are listed in Table 1[illegible]. Because of this, I will separate the discussions of causal paths and interactions. I will first examine changes in background variables' coefficients when the mediating variables, Education and Experience, are entered. I will then consider interactions by looking at multiplicative terms' coefficients and fitting split-sample regression equations. The multivariate analyses are all based on the complete data sample, shown in Tables 2 and 2A.

EDUCATION

The first equation in Table 13A shows that measured background variables explain 31.6 percent of the variance in Education. If squared terms are included, this rises to 3[illegible].8 percent. When Age is included, R^2 rises to 34.8 percent. The average difference between white and other respondents, from Table 6, was about 2.76 years of Education, while the corresponding figure in Table 13A (the B coefficient of White in equation 3) is 1.199. This suggests that more than half of the effect of Race on Education is due to the fact that Race is associated with parental status, family size, and place of upbringing. The standardized coefficient of White, 0.095 is commensurately smaller than the simple correlation, 0.210. The other background variables' coefficients behave similarly. The standardized coefficient in equation 3 of Table 13A is about 52 percent of the simple correlation with Father's Education, 32 percent with Father's Occupation, 28 percent with Father White Collar, 90 percent with Father Absent, 25 percent with Nonfarm Upbringing, 41 percent with Nonsouth Upbringing, and 48 percent with Siblings. This suggests that all of these variables work in concert, but that they have individuals impacts as well.

When I entered the squared Father's Occupation and Siblings terms (squared Father's Education was insignificant in a preliminary multivariate analysis), the coefficients of other variables did not change appreciably. This suggests that the variables in the first equation did not enter to compensate for the non-linear effects of Father's Occupation and Siblings. However, the coefficient of Siblings^2 is smaller in Table 13A (0.01261) than it is in Table 5B (0.02329). This suggests that to a certain extent the significance of Siblings^2 in Table 5B was due to the incompleteness of the bivariate model.

The entry of Age, in equation 3 of Table 13A, leaves most other coefficients unchanged. The simple correlation of Age with Education was -0.243 , while its standardized coefficient was -0.175, or 28 percent smaller. This means that less than one-third of the secular increase in educational attainment can be traced to changes in measured background characteristics.

The inclusion of the two significant interaction variables increased R^2 by only 0.002. An examination of the sub-sample estimates in Table 13B through 13D confirms the general conclusion that Education's relationship to background variables is additive and virtually linear. This fact enables us to enter Education in more complicated equations with some confidence that the results are not due to odd mis specifications of the Education/background relationship.

OCCUPATION

We can turn now to Occupation. Family background coefficients change when we move from a bivariate to a multivariate model in much the same way when we predict Occupation as when we predict Education. The impact of individual variables is reduced from their bivariate levels, while the total R^2 becomes about twice what it was for any one variable. Moreover, coefficients do not change appreciably with the entry of orthogonal squared and interaction terms.

The inclusion of Education, Higher Education, and BA in equation 6 changes this pattern of effects markedly. The coefficients of Father White Collar, Nonsouth Upbringing, Father's Education^2 and

Siblings^2 become statistically insignificant, while their standardized coefficients drop below 0.02. The standardized coefficients of all other background variables decrease by 21 to 88 percent.

Such a pattern of changes suggests that many of the effects we estimated in equations 1, 2, and 3 are mediated through Education. That is, Father's Education influences Education, which in turn affects Occupation. Variations in Father's Education which do not influence Education have virtually no effect on Occupation.

If Education served only as a mediating factor for background effects, then R^2 would not change by much when it entered. However, R^2 increased by 0.202 when I added Education and its splines in equation 6.

In addition, the coefficients of the Education variables in Table 14A are similar to those in Table 9B. Years of Education and Higher Education have somewhat smaller effects than they did in the bivariate model. The effect of completing four years of college (BA) is somewhat larger, however, so the net effect of completing college is about the same. These facts suggest that Education also has an independent influence on Occupation.

When I entered Experience and Experience^2 in Equation 7, R^2 rose by 0.006 from 0.4475 to 0.4538. The standardized coefficient of Education rises about 16 percent when Experience and Experience^2 are controlled.

The changes in most other coefficients are small. This is consistent with the finding from Table 10 that Experience did not explain much variance in Occupation once Education was included in an equation.

The overall conclusions from these equations are that (1) the effect of background variables on Occupation is largely indirect, through Education. Race and Father's Occupation are the only substantively important exceptions. (2) Education has a substantial effect above and beyond its mediating role, and (3) Experience's effect is essentially to clarify the specification of Education.

INCOME

Table 15A shows the effects of various characteristics on Income. The general pattern of findings is similar to that of Occupation.

The background variables considered in Table 15A explain 15.1 percent of the variance in Income, once nonlinearities and interactions have been included. Education by itself explained 16.6 percent of the Income variation. When it is entered in equation 6 of Table 15A R^2 is only 0.2130. This suggests that background variables have a small direct effect on Income. The standardized coefficients of these variables are generally less than 0.065. Race and Father's Occupation are the only exception. R^2 rose by 0.033 from 0.2130 to 0.2456 when I added Experience and Experience^2 in equation 7. The Education coefficient increased, but this was the only coefficient that was significantly affected.

The picture that emerges when we consider Ln Income is considerably less complex than those we found for Occupation and untransformed Income. Table 16A shows that, as before, Education and its splines mediate a considerable portion of most background effects. The standardized coefficient of Race was reduced by 15 percent, and those of the other background variables by 20 to 100 percent when the Education variables were entered in equation 6. A similar pattern for $\text{Income}^{1/3}$ is apparent in Table 17.

The explanatory power of the Income and Ln Income models is similar, but the relative importance of specific variables depends on which income measure one looks at. Most linear, additive variables have larger standardized coefficients in the Ln Income equation. The reason is that non-linearities and interactions are more important in the Income equations. The general implication of this pattern is that it is easier to describe the relationship between background, education and income using a semi-log model than using untransformed income as the dependent variable.

Taken together, these equations suggest that once Education is included in a model, background characteristics other than Race have little direct impact on economic success. The effects of Education are somewhat complicated. Higher education has different effects than elementary and secondary education, and foregone Experience detracts from the value of those later years. However, the pattern of these differences varies with the measure of success. Subsequent chapters will consider these multivariate results in conjunction with other data.

INTERACTIONS

I have discussed multivariate models thus far as though the effects of any one characteristic did not depend on the respondent's other characteristics. This implies that all effects are additive. Additive models are much clearer conceptually than interactive models, but there is no prima facie reason to believe that the social process we have been modelling is in fact additive. We therefore undertook two analyses to test for interactions among the independent variables. The first method assumes the coefficient of one variable is some simple function of another. and that the function's form is known or assumed. The effect of interaction is estimated by including an appropriate function of the interacting variables as a separate term. The problem with this first method is obvious. The functional form of the interaction is seldom known, and guesses may be wrong. If the test finds no interaction one cannot be sure whether this is because the interaction doesn't exist or because one's guess about its form was wrong. The second method does not require much guess-work. The sample is divided into subsamples which differ on one variable, and regressions are estimated within each subsample. If the coefficients of the other variables differ from subsample to subsample, then interaction exists. This second method also has problems. The subsamples are smaller than the whole sample, so the tests for differences between coefficients become less powerful. In addition, unless one divides the sample in several ways at once it is still difficult to assess the importance of higher order interaction involving three or more variables. Rather than choose one of these methods to search for interactions, we have used both.

My suspicion, based on earlier work, was that few interactions would have any explanatory power. I therefore restricted the list of variables to consider in these analyses. For the first method, I considered Education and its splines, Father's Occupation, Race, Experience/Age, and Siblings. I created all the logically possible products of these variables. I then tested the significance of each multiplicative interaction term involving only background variables when it was entered in an equation that included additive background variables. I tested the significance of multiplicative terms involving Education and Experience by looking at their coefficients after the additive effects of these variables had entered. Table 20 gives the results of this analysis and the sign with which each term would have entered. I then added the interaction terms to the basic model in order of explanatory power until no term remained whose coefficient would exceed 1.96 times its standard error. Finally, I reestimated the equation, making all interaction terms that had entered orthogonal to their components. This means the interaction terms explain only that part of the interaction effect that is uncorrelated with either of the component variables in question.[6]

This procedure eases interpretation and makes for more accurate computation. It has no effect on the total explanatory power of the variables or their interactions. Nor does it alter the unstandardized coefficients of the interactions. It does alter the unstandardized coefficients of the additive terms, by keeping them essentially the same as the coefficients without interactions.

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[6] See Chapter 12 for a discussion of this procedure and its interpretation.

An inescapable consequence of this broad search for interactions is difficulty in interpreting the equally broad results. In general, multiplicative interactions do not increase the explanatory power of our models by much. The R^2 differences between additive and interactive models range from 0.002 for Education to 0.013 for Occupation. The split-sample analysis, which used Race, Age, and Father's Occuation to divide the sample, reinforces this conclusion. The within-subsample R^2's are not notably different from the whole-sample figures. I will not discuss specific interaction results in any detail, since their overall usefulness is so limited. The multiplicative interaction terms are entered in equation 5 of Table 13A and equations 5 and 8 of Tables 14A, 15A, 16A and 17. The split-sample results are presented in Tables 13B, 14B, 15B and 16B for Race, in Tables 13C, 14C, and 16C for Age, and in Tables 13D, 14D, and 16D for categories of Father's Occupation.

As expected, Race interacts with several variables, especially Age/Experience, Father's Occupation, and Education. Tables 13A to 17 show that no other variable has such pervasive interactive effects. The general conclusion from earlier research, much of which focussed on whites, was that interactions account for little variance in measures of success. That conclusion is supported in these data.

It is also not surprising that few new findings have emerged from this reanalysis of the OCG data. More background variables explain more variance, as do some variable specifications that allow nonlinearity. A few interactions appear to have an impact on variance in measures of success. But in general the findings resemble those from other analyses. Of more interest to this project is the fact that these findings are comparable to those from other more recent surveys and will therefore serve as a baseline for discussing these surveys.

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Table 1: Basic Variables from the OCC Survey, with Frequencies of Responses for 18,094 Men Aged 25-64 With Non-Zero or Missing Income

Variable	Question and Coding			Frequency (%)
Race		White	1	90.4
		Negro	0	8.5
		Other	0	1.1
				100.0
Father Absent	Were you living with both your parents most of the time up to age 16? If "no", who was the head of your family?	Both Parents	0	83.2
		Father Only	0	3.7
		Mother Only	1	8.6
		Other Male	1	3.2
		Other Female	1	1.3
				100.0
		NA	(N=135)	
Father's Education	What is the highest grade of school your father or person listed as head of your family completed?	None	0	7.4
		Elementary 1-4	3	12.5
		Elementary 5-7	6	21.1
		Elementary 8	8	27.4
		High School 1-3	10	10.0
		High School 4	12	12.8
		College 1-3	14	4.3
		College 4	16	2.7
		College 5+	18	1.8
				100.0
		NA	(N=2124)	
Father's Occupation	Now we would like to find out what kind of work your father did when you were about 16 years old. If you were not living with your father, please answer for the person listed as head of your family. What kind of work was he doing? What kind of business or industry was this? Was he self-employed in his own business, professional practice, or farm? Coded to Duncan scores.	0-9	(0-96)	12.8
		10-19		46.1
		20-29		7.4
		30-39		9.6
		40-49		7.2
		50-59		5.9
		60-69		5.2
		70-79		3.3
		80-89		1.6
		90-96		0.8
				100.0
		NA	(N=1507)	

Table 1 Continued

Variable	Question and Coding			Frequency (%)
Non South Upbringing	Where were you born?	Non-South	1	70.4
		South	0	29.6
				100.0
Non Farm Upbringing	Where were you living when you were 16 years old? (See text for details on the construction of this variable)	Rural farm	0	21.2
		Other	1	78.8
				100.0
Siblings	How many brothers do you have? How many sisters do you have? Count those born alive but no longer living as well as those alive now. Also include stepbrothers and sisters and children adopted by your parents.	0		6.0
		1		11.9
		2		14.5
		3		13.7
		4		11.7
		5		9.6
		6		8.1
		7		6.8
		8		5.3
		9		4.1
		10		3.0
		11+		5.2
				100.0
		NA	(N=431)	
Age	Age last birthday. Month of birth. Coded in single years using age in 1962.	25-29		12.8
		30-34		13.9
		35-39		14.7
		40-44		14.3
		45-49		13.2
		50-54		12.3
		55-59		10.3
		60-64		8.6
				100.0
Education	What is the highest grade of school he has ever attended? Did he finish this grade?	None	0	1.2
		Elementary 1-4	3	4.5
		Elementary 5-7	6	10.3
		Elementary 8	8	14.7
		High School 1-3	10	19.0
		High School 4	12	27.6
		College 1-3	14	10.0
		College 4	16	7.5
		College 5+	18	5.4
				100.0

Table 1 Continued

Variable	Question and Coding		Frequency (%)
Experience	Experience in 1961 = Age in 1961 less Education +6 or Age in 1961 less 13, whichever is smaller. Coded in single years.	0	0.1
		1-5	2.8
		6-10	10.1
		11-15	13.1
		16-20	13.6
		21-25	13.3
		26-30	12.6
		31-35	11.1
		36-40	10.1
		41-45	8.3
		46-50	4.9
			100.0
Occupation	For whom did he work? What kind of business or industry was this? What kind of work was he doing? Was this person self-employed, in own business, professional practice or farm? Coded to Duncan scores.	0-9	10.4
		10-19	25.9
		20-29	11.1
		30-39	9.8
		40-49	11.3
		50-59	7.5
		60-69	10.0
		70-79	7.5
		80-89	5.1
		90-96	1.6
			100.0
		NA (N=1184)	

Variable	Question and Coding			Frequency (%)
Income	Last year (1961) how much did he earn? In wages or salary? By working in his own business or professional practice or partnership. By working on his own farm? Whether or not he worked during 1961, did he receive any money from Social Security, Veteran's payments or other government or private pensions? Dividends, interest on savings accounts or bonds or income from annuities, estates or trusts? Net income from rental of property or from boarders or lodgers? Anything else -- unemployment or sickness benefits, public assistance, regular contributions from relatives not living in this household, alimony etc.	1-499 or less	250	3.5
		500-999	750	3.2
		1000-1499	1250	3.5
		1500-1999	1750	2.9
		2000-2499	2250	4.4
		2500-2999	2750	4.0
		3000-3499	3250	6.0
		3500-3999	3750	5.3
		4000-4499	4250	6.7
		4500-4999	4750	6.6
		5000-5999	5500	15.4
		6000-6999	6500	11.8
		7000-7999	7500	9.3
		8000-9999	9000	7.8
		10000-14999	12000	6.4
		15000-24999	18000	2.4
		25000+	33000	0.9
				100.0
		Not asked	(N=3890)	

I assigned the midpoint as the value for each category up to $9999. I coded the values for the other 3 categories using the observed means for respondents in the

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Table 2: Means and Standard Deviations of Basic Variables for 18,094 OCG Men Aged 25-64 With Non-Zero or Missing Income: Comparison of Full and Complete Data Samples

	Means			Standard Deviations			Valid Responses	
	Full	Complete Data	Partial Data[1]	Full	Complete Data	Partial Data[1]	Full	Partial[1]
		N=11,504			N=11,504			
Race	.904	.904	.904	.295	.295	.294	18094	6590
Father's Education	7.726	7.728	7.718	4.020	3.920	4.091	15970	4858
Father's Occupation	26.913	27.485	25.837	20.942	20.517	20.517	16587	5753
Father White Collar	.234	.241	.216	.423	.416	.411	16587	5753
Father Absent	.137	.156	.105	.344	.363	.307	18094	6590
Siblings	4.468	4.358	4.674	3.203	3.143	3.301	17663	6159
Non-Farm Upbringing	.789	.790	.787	.408	.408	.410	18094	6590
Non-South Upbringing	.703	.707	.698	.457	.455	.459	18094	6590
Education	10.690	10.925	10.280	3.745	3.690	3.806	18094	6590
Age	43.115	42.574	44.062	10.928	10.713	11.233	18094	6590
Experience	25.057	24.331	26.325	12.105	11,857	12.425	18094	6590
Occupation	37.477	38.101	36.150	24.621	24.873	24.024	16910	5406
Income	5826.90	6065.12	4811.50	4307.32	4348.55	3970.49	14204	2700
$\text{Income}^{1/3}$	17.007	17.315	15.693	4.236	4.113	4.493	14204	2700
Ln Income	8.391	8.455	8.116	.862	.819	.980	14204	2700

Note: 1. CPS did not ask (18,094 - 14,204) = 3,890 men in the weighted full sample to report their income. Therefore, a significant proportion of the men are in the partial sample because they were not asked their income. These men are a random sample of the population. Had we excluded those not asked their income from the full sample, the partial sample might have been more different from the full sample than it is here.

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Table 2A: Correlations of Basic Variables for OCG Men Age 25-64 with Positive or Missing Income: Comparisons of Full (f) and Complete Data (cd) Samples

		White	Father's Education	Father's Occupation	Father White Collar	Father Absent	Siblings	Non-South Upbringing	Non-Farm Upbringing	Education
White	cd	1.000	.144	.139	.103	-.140	-.132	.291	.016	.210
	f	1.000	.145	.147	.109	-.117	-.121	.288	.020	.217
Father's Education	cd		1.000	.464	.391	.009	-.273	.152	.151	.428
	f		1.000	.477	.401	.017	-.283	.158	.149	.441
Father's Occupation	cd			1.000	.785	-.032	-.264	.140	.288	.417
	f			1.000	.787	-.023	-.273	.146	.287	.427
Father White Collar	cd				1.000	-.012	-.236	.100	.246	.374
	f				1.000	-.008	-.244	.107	.249	.374
Father Absent	cd					1.000	-.058	-.066	.048	-.108
	f					1.000	-.057	-.053	.042	-.082
Siblings	cd						1.000	-.162	-.191	-.332
	f						1.000	-.155	-.187	-.330
Non-South Upbringing	cd							1.000	.169	.218
	f							1.000	.170	.213
Non-Farm Upbringing	cd								1.000	.212
	f								1.000	.207
Education	cd									1.000
	f									1.000
Age	cd									
	f									
Experience	cd									
	f									
Occupation	cd									
	f									
Income	cd									
	f									
Income$^{1/3}$	cd									
	f									
Ln Income	cd									
	f									

Table 2A: Correlations of Basic Variables for OCG Men Age 25-64 with Positive or Missing Income: Comparisons of Full (f) and Complete Data (cd) Samples (Continued)

		Age	Experience	Occupation	Income	Income$^{1/3}$	Ln Income
White	cd	.034	-.013	.234	.214	.276	.280
	f	.023	-.024	.231	.209	.262	.262
Father's Education	cd	-.139	-.237	.321	.220	.235	.219
	f	-.145	-.243	.326	.224	.235	.217
Father's Occupation	cd	-.070	-.178	.402	.301	.290	.253
	f	-.074	-.181	.408	.311	.293	.255
Father White Collar	cd	-.042	-.142	.356	.260	.244	.211
	f	-.049	-.146	.356	.265	.242	.207
Father Absent	cd	.016	.039	-.078	-.063	-.079	-.077
	f	.001	.018	-.063	-.053	-.064	-.061
Siblings	cd	.124	.200	-.262	-.184	-.199	-.184
	f	.130	.205	-.260	-.178	-.188	-.173
Non-South Upbringing	cd	.024	-.027	.160	.185	.222	.216
	f	.022	-.027	.146	.180	.217	.212
Non-Farm Upbringing	cd	-.102	-.147	.209	.166	.194	.191
	f	-.102	-.145	.199	.161	.187	.183
Education	cd	-.243	-.475	.609	.399	.432	.404
	f	-.259	-.482	.604	.398	.433	.407
Age	cd	1.000	.966	-.045	.037	.000	-.021
	f	1.000	.968	-.047	.010	-.035	-.057
Experience	cd		1.000	-.207	-.072	-.108	-.116
	f		1.000	-.207	-.092	-.136	-.146
Occupation	cd			1.000	.481	.488	.434
	f			1.000	.476	.482	.428
Income	cd				1.000	.912	.796
	f				1.000	.910	.795
Income$^{1/3}$	cd					1.000	.970
	f					1.000	.971
Ln Income	cd						1.000
	f						1.000

Table 2B: Means and Standard Deviations of Characteristics of OCG Men Age 25-64 With Complete Data on All Variables and Non-Zero Income by Race (N=11,504)

	White Mean	SD	Non-White Mean	SD
White	1.000	0	0	0
Father's Education	7.913	3.881	5.995	3.859
Father's Occupation	28.415	20.936	18.768	13.209
Father White Collar	.255	.427	.110	.265
Father Absent	.139	.346	.311	.463
Non South Upbringing	.750	.433	.301	.459
Non Farm Upbringing	.792	.406	.769	.422
Siblings	4.223	3.045	5.624	3.720
Age	42.694	10.700	41.448	10.771
Education	11.178	3.552	8.551	4.093
Experience	24.279	11.859	24.820	11.840
Occupation	39.998	24.742	20.324	18.162
Income	6370	4405	3212	2290
$\text{Income}^{1/3}$	17.685	3.976	13.843	3.730
Ln Income	8.530	.769	7.752	.937
N	10394		1110	

Table 2C: (AGE) Means and Standard Deviations of Characteristics of OCG Men, Ages 25-64 With Complete Data on All Variables and Non-Zero Income By Age. (N=11,504)

	Age 25-34		Age 35-44		Age 45-54		Age 55-64	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
White	.887	.316	.905	.294	.913	.282	.914	.281
Father's Education	8.522	3.818	7.730	3.866	7.333	3.923	7.030	3.954
Father's Occupation	29.395	21.417	27.795	20.679	26.334	19.686	25.574	19.680
Father White Collar	.264	.431	.245	.420	.227	.405	.218	.399
Father Absent	.149	.356	.149	.356	.172	.378	.155	.362
Non South Upbringing	.688	.463	.715	.451	.704	.457	.725	.447
Non Farm Upbringing	.842	.365	.797	.403	.768	.422	.726	.446
Siblings	3.872	3.093	4.234	3.074	4.603	3.139	4.996	3.209
Age	29.588	2.883	39.439	2.850	49.347	2.856	58.986	2.782
Education	11.943	3.310	11.254	3.577	10.448	3.683	9.409	3.870
Yrs. Higher Educ.	1.165	1.918	.951	1.807	.729	1.616	.579	1.466
B.A.	.189	.391	.153	.360	.106	.308	.093	.290
Experience	10.495	4.234	20.922	4.349	31.520	4.372	41.980	4.237
Occupation	38.852	25.608	39.569	25.176	36.862	23.832	36.158	24.463
Income	5467	3400	6506	4230	6423	5071	5716	4596
$Income^{1/3}$	16.900	3.591	17.857	3.919	17.496	4.500	16.758	4.474
Ln Income	8.401	.738	8.562	.758	8.469	.887	8.332	.912
N	3166		3443		2951		1944	

Table 2D: Mean and Standard Deviations of Characteristics of OCG Men Age 25-64 With Complete Data on All Variables and Non-Zero Income by Father's Occupation (N=11,504)

	Father White Collar		Father Blue Collar		Father Farm	
	Mean	SD	Mean	SD	Mean	SD
White	.969	.174	.920	.272	.863	.344
Father's Education	10.523	4.185	7.180	3.399	6.337	3.413
Father's Occupation	56.796	17.190	21.189	13.859	13.439	2.330
Father White Collar	1.000	0	0	0	0	0
Father Absent	.102	.302	.106	.308	.102	.303
Non South Upbringing	.794	.405	.762	.426	.573	.495
Non Farm Upbringing	.967	.178	.953	.213	.385	.487
Siblings	3.023	2.546	4.275	3.031	5.613	3.259
Age	41.674	10.705	41.304	10.519	44.892	10.659
Education	13.520	3.084	10.875	3.204	9.236	3.570
Experience	21.117	11.752	23.209	11.471	28.061	11.589
Occupation	54.651	23.912	37.430	23.541	27.426	20,721
Income	8159	5838	5997	3512	4623	3124
$Income^{1/3}$	19.193	4.307	17.500	3.521	15.716	4.039
Ln Income	8.780	.745	8.515	.693	8.142	.915
N	2631		4915		3288	

Table 3A: Measures of Success by Levels of Father's Education for OCG Men Age 25-64 With Non-Zero or Missing Income

Years of Father's Education	N	Education		Occupation		Income		Income$^{1/3}$		Ln Income	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Total	18094	10.690	3.745	37.477	24.621	5827	4307	17.007	4.236	8.391	.862
0-4	3179	8.616	3.957	28.611	21.780	4789	3985	15.705	4.414	8.122	.968
5-7	3374	10.150	3.407	33.841	23.059	5218	3369	16.487	3.919	8.305	.833
8	4377	10.967	3.118	37.319	23.459	5905	3891	17.241	3.927	8.448	.798
9-11	1594	11.854	3.154	42.046	25.334	6098	4057	17.423	3.970	8.480	.795
12	2037	12.662	3.033	47.818	24.897	7186	4856	18.457	4.022	8.665	.740
13-15	684	13.592	2.935	54.083	24.026	7565	5797	18.549	4.592	8.656	.843
16	437	14.387	3.050	59.520	24.434	9114	7242	19.582	5.202	8.803	.901
17+	287	15.426	2.811	62.096	21.549	8603	6228	19.389	4.778	8.785	.870
Missing	2124	8.981	3.499	30.122	21.238	5119	3856	16.294	4.038	8.264	.852
N Reporting Dependent Variable		18094		16910		14204		14204		14204	
eta^2		.1977		.1125		.0553		.0562		.0469	

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Table 3B: Regressions of Measures of Success on Father's Education for Civilian, Non-Institutional Males Aged 25-64 with Non-Zero Income: OCG Complete Data Sample (N=11,504)

	Father's Education	Father's Education^2	No Father	Constant	R^2	Residual S.D.
Education	.40289 (.00793)			7.81134	.1832	3.33473
	.30314 (.02370)	.00632 (.00140)	-1.12173 (.08508)	8.28270	.1972	3.30645
Occupation	2.03450 (.05604)			22.37824	.1028	23.56026
	.58718 (.16764)	.09105 (.00992)	-5.35183 (.60184)	27.56015	.1159	23.38936
Income	244.42 (10.09)			4176.21	.0486	4241.86
	[5.18] (30.25)	15.04 (1.79)	-739.19 (108.58)	5010.70	.0586	4219.87
Income$^{1/3}$	.24652 (.00951)			15.40966	.0552	3.99772
	.13445 (.02853)	.00708 (.00169)	-.89730 (.10244)	15.88417	.0632	3.98120
ln Income	.04567 (.00190)			8.10227	.0478	.79933
	.03771 (.00571)	[.00051] (.00034)	-.17301 (.02050)	8.15330	.0543	.79667

Coefficients in brackets are less than 1.96 times their standard errors.

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Table 4A: Measures of Success by Levels of Father's Occupation for OCG Men Age 25-64 With Non-Zero or Missing Income.

Father's Occupation	N	Education		Occupation		Income		Income$^{1/3}$		Ln Income	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Total	18094	10.690	3.745	37.477	24.621	5827	4307	17.007	4.236	8.391	.862
0-9	2121	9.303	3.545	28.525	21.216	4798	2994	16.071	3.736	8.232	.819
10-19	7640	9.717	3.512	30.883	21.984	4964	3465	16.112	4.078	8.221	.895
20-29	1226	11.035	3.136	39.371	22.712	6051	3486	17.509	3.662	8.510	.722
30-39	1596	11.755	3.267	44.835	23.494	6577	3827	18.035	3.673	8.602	.714
40-49	1192	12.327	3.083	46.975	24.179	6398	3651	17.884	3.602	8.580	.696
50-59	982	12.759	3.262	50.715	23.841	7663	5462	18.755	4.350	8.701	.796
60-69	867	13.561	2.992	57.573	22.654	8743	6471	19.517	4.710	8.813	.829
70-79	555	14.061	2.810	57.535	23.286	8719	6087	19.714	4.158	8.874	.672
80-89	271	14.987	2.790	62.265	24.156	9626	7000	20.108	5.006	8.893	.874
90+	137	15.034	2.806	62.655	26.802	8936	7166	19.366	5.396	8.752	.977
Missing	1507	9.493	3.903	31.657	22.984	5366	4824	16.361	4.411	8.264	.892
N Reporting Dependent Variable		18094		16910		14204		14204		14204	
eta^2		.1727		.1600		.0887		.0838		.0660	

Table 4B: Regressions of Measures of Success on Father's Occupation for Civilian, Non-Institutional Males Aged 25-64 with Non-Zero Income: OCG Complete Data Sample (N=11,504)

	Father's Occupation	Father's Occupation^2	No Father	Constant	R^2	Residual S.D.
Education	.07501 (.00152)			8.86333	.1740	3.35357
	.09397 (.00556)	-.00025 (.00007)	-1.00891 (.08663)	8.78862	.1839	3.33368
Occupation	.48711 (.01035)			24.71284	.1615	22.77735
	.64695 (.03785)	-.00205 (.00046)	-4.88904 (.58988)	23.48980	.1672	22.70084
Income	63.70 (1.88)			4314.29	.0903	4147.67
	66.13 (6.91)	[-.04] (.08)	-646.47 (107.62)	4389.54	.0932	4141.50
Income$^{1/3}$	.05809 (.00179)			15.71827	.0840	3.93640
	.07898 (.00654)	-.00027 (.00008)	-.83666 (.10198)	15.59088	.0897	3.92442
Ln Income	.01011 (.00036)			8.17725	.0642	.79242
	.01533 (.00132)	-.00007 (.00002)	-.16899 (.02052)	8.13885	.0704	.78985

Coefficients in brackets are less than 1.96 times their standard errors.

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Table 5A: Measures of Success by Number of Siblings for OCG Men Age 25-64 with Non-Zero or Missing Income Data.

Number of Siblings	N	Education		Occupation		Income		Income$^{1/3}$		Ln Income	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Total	18094	10.690	3.745	37.477	24.621	5827	4307	17.007	4.236	8.391	.862
0	1062	12.367	3.570	45.575	25.892	6634	4908	17.789	4.341	8.532	.837
1	2109	12.620	3.445	48.148	25.596	7079	5273	18.163	4.465	8.592	.846
2	2566	11.958	3.450	43.452	25.475	6710	4755	17.953	4.137	8.571	.786
3	2423	11.042	3.575	39.438	24.493	6039	4282	17.303	4.083	8.454	.814
4	2059	10.484	3.561	36.214	23.957	5653	4187	16.827	4.219	8.356	.875
5	1698	10.080	3.501	34.006	22.712	5409	3771	16.609	4.127	8.317	.876
6	1428	9.719	3.353	32.134	21.790	5357	3772	16.619	3.955	8.330	.829
7	1197	9.453	3.548	31.086	22.007	5043	3223	16.266	3.977	8.256	.877
8	934	9.108	3.751	29.934	21.947	4982	3951	16.038	4.226	8.203	.901
9	729	9.038	3.616	29.710	21.874	4618	3159	15.671	4.107	8.132	.911
10+	1458	8.604	3.447	26.303	19.698	4535	3345	15.579	4.056	8.116	.906
Missing	431	10.901	3.717	39.378	24.983	5744	3927	17.078	3.875	8.425	.766
N Reporting		18094		16910		14204		14204		14204	
ependent Variable eta^2		.1177		.0735		.0348		.0380		.0320	

Table 5B: Regressions of Measures of Success on Number of Siblings for Civilian, Non-Institutional Males Aged 25-64 with Non-Zero Income: OCG Complete Data Sample (N=11,504)

	Siblings	Siblings^2	Constant	R^2	Residual S.D.
Education	-.38913 (.01033)		12.62059	.1099	3.48122
	-.65547 (.03097)	.02329 (.00253)	13.10901	.1163	3.46885
Occupation	-2.07563 (.07120)		47.14588	.0688	24.00268
	-3.58679 (.21380)	.13212 (.01763)	49.91700	.0733	23.94534
Income	-254.99 (12.68)		7176.27	.0340	4274.23
	-418.32 (38.13)	14.28 (3.14)	7475.80	.0357	4270.59
Income$^{1/3}$	-.25977 (.01196)		18.44678	.0394	4.03100
	-.37916 (.03597)	.01044 (.00297)	18.66572	.0405	4.02901
Ln Income	-.04789 (.00239)		8.66389	.0338	.80513
	-.06572 (.00719)	.00156 (.00059)	8.69658	.0344	.80498

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Table 6: Measures of Success by Race of OCG Men Age 25-64 With Non-Zero or Missing Income

Race	N	Education		Occupation		Income		Income$^{1/3}$		Ln Income	
Total	18094	10.690	3.745	37.477	24.621	5827	4307	17.007	4.236	8.391	.862
White	16357	10.951	3.602	39.339	24.441	6131	4378	17.380	4.124	8.466	.819
Black	1538	7.918	4.003	17.857	15.495	2980	2110	13.492	3.657	7.675	.935
Other	199	10.296	4.488	34.944	24.582	4261	3139	15.138	4.229	8.015	.954
N Reporting ependent Variable		18094		16910		14204		14204		14204	
Eta^2		.0511		.0585		.0448		.0705		.0704	

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Table 7A: Measures of Success by Age of OCG Men Age 25-64 With Non-Zero or Missing Income

Age	N	Education		Occupation		Income		Income$^{1/3}$		Ln Income	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Total	18094	10.690	3.745	37.477	24.621	5827	4307	17.007	4.236	8.391	.862
25-29	2310	11.886	3.222	37.276	25.158	4818	2930	16.223	3.402	8.280	.730
30-34	2507	11.714	3.432	39.166	25.412	5747	3770	17.098	3.861	8.425	.791
35-39	2666	11.308	3.665	39.500	25.019	6377	4228	17.722	3.922	8.539	.754
40-44	2579	10.905	3.555	38.553	24.744	6350	4286	17.637	4.076	8.514	.809
45-49	2383	10.491	3.576	36.688	23.233	6336	4882	17.408	4.526	8.449	.913
50-54	2219	9.907	3.847	35.838	24.086	5974	4907	16.985	4.578	8.370	.925
55-59	1866	9.273	3.923	35.082	24.335	5418	4427	16.322	4.697	8.229	1.003
60-64	1564	8.973	3.838	35.843	24.288	5134	4622	16.021	4.672	8.180	.964
N Reporting Dependent Variable		18094		16910		14204		14204		14204	
eta^2		.0665		.0039		.0165		.0204		.0191	

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Table 7B: Regressions of Measures of Success on Age for Civilian, Non-Institutional Males Aged 25-64 with Non-Zero Income: OCG Complete Data Sample (N=11,504)

	Age	Age^2	Constant	R^2	S. D. of Residual
Education	-.08370 (.00312)		14.48855	.0591	3.57923
	[-.00938] (.02621)	-.00085 (.00030)	12.97094	.0597	3.57812
Occupation	-.10345 (.02163)		42.50518	.0020	24.84897
	[.34852] (.18198)	-.00520 (.00208)	33.27688	.0025	24.84329
Income	14.94 (3.78)		5429.21	.0014	4345.79
	431.33 (31.39)	-4.79 (.36)	-3072.63	.0164	4313.07
Income$^{1/3}$	[.00003] (.00358)		17.31358	.0000	4.11288
	.40349 (.02989)	-.004[illegible]4 (.00[illegible]4)	9.07564	.0158	4.08040
ln Income	-.00160 (.00071)		8.52311	.0004	.81896
	.06848 (.00596)	-.00[illegible]81 (.00[illegible]07)	7.09231	.0125	.81405

Coefficients in brackets are less than 1.96 times their standard errors.

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Table 9A: Measures of Success by Level of Education of OCG Men Age 25-64 With Non-Zero or Missing Income

Years of Education	N	Occupation Mean	Occupation SD	Income Mean	Income SD	Income$^{1/3}$ Mean	Income$^{1/3}$ SD	Ln Income Mean	Ln Income SD
Total	18094	37.477	24.621	5827	4307	17.007	4.236	8.391	.862
None	220	12.399	10.694	1826	1774	10.990	3.817	7.006	1.068
1-4	816	17.256	14.167	2766	2334	12.904	3.986	7.512	1.017
5-7	1859	20.699	14.855	3831	2650	14.732	3.846	7.947	.911
8	2650	25.194	17.477	4702	2861	16.004	3.616	8.224	.803
9-11	3426	29.503	18.831	5264	3398	16.650	3.641	8.352	.760
12	4985	39.338	21.490	6101	3511	17.641	3.422	8.545	.665
13-15	1809	50.737	22.419	7188	5090	18.364	4.246	8.638	.791
16	1354	66.257	17.802	9108	6046	20.033	4.188	8.919	.695
17+	975	75.324	15.451	9707	6661	20.191	5.006	8.900	.904
N Reporting Dependent Variable		16910		14204		14204		14204	
eta^2		.4058		.1660		.1903		.1742	

Table 9B: Regressions of Measures of Success on Education for Civilian, Non-Institutional Males Aged 25-64 with Non-Zero Income: OCG Complete Data Sample (N=11,504)

	Education	Years of Higher Education	B.A.	Constant	R^2	Sd. of Residuals
Occupation	4.10476 (.04986)			-6.74319	.3708	19.73065
	2.70056 (.07305)	3.07854 (.28863)	5.16318 (1.27535)	5.13352	.4081	19.13783
Income	469.93 (10.08)			931.20	.1590	3988.09
	372.58 (15.16)	[105.42] (59.89)	983.32 (264.64)	1762.90	.1662	3971.23
Income$^{1/3}$	.48138 (.00937)			12.05580	.1865	3.70956
	.49956 (.01414)	-.27457 (.05588)	1.29228 (.24692)	11.92021	.1885	3.70535
Ln Income	.08978 (.00189)			7.47440	.1635	.74916
	.10570 (.00285)	-.09239 (.01126)	.27425 (.04977)	7.34415	.1690	.74681

Coefficients in brackets are less than 1.96 times their standard errors.

Table 10. Regressions of Measures of Success on Education for Civilian, Non-Insitutional Males Aged 25-64 with Non-Zero Income: OCG Complete Data Sample (N=11,504)

	Year's Education	Year's High School	B.A.	Experience	Experience^2	Constant	R^2	Residual S.D.
Occupation	2.70056	3.07854	5.16318			5.13352	.4081	19.13783
	(.07305)	(.28863)	(1.27535)					
	3.04137	2.98067	5.29330	.20580		-3.52823	.4156	19.01797
	(.07786)	(.28694)	(1.26741)	(.01701)				
	3.05790	2.93567	5.26687	[.10464]	[.00200]	-2.66789	.4157	19.01671
	(.07855)	(.28832)	(1.26743)	(.06590)	(.00126)			
Income	372.58	[105.42]	983.32			1762.90	.1662	3971.23
	(15.16)	(59.89)	(264.64)					
	463.03	[79.44]	1017.85	54.62		-535.87	.1834	3930.36
	(16.09)	(59.30)	(261.93)	(3.51)				
	430.18	168.87	1070.37	255.66	-3.97	-2245.70	.2000	3890.43
	(16.07)	(58.98)	(259.29)	(13.48)	(.26)			
Income$^{1/3}$	.49956	-.27457	1.29228			11.92021	.1885	3.70535
	(.01414)	(.05588)	(.24692)					
	.57226	-.29545	1.32004	.04390		10.07249	.2009	3.67712
	(.01505)	(.05548)	(.24505)	(.00329)				
	.54479	-.22068	1.36395	.21200	-.00332	8.64283	.2138	3.64735
	(.01507)	(.05530)	(.24309)	(.01264)	(.00024)			
ln Income	.10570	-.09239	.27425			7.34415	.1690	.74681
	(.00285)	(.01126)	(.04977)					
	.11725	-.09570	.27866	.00697		7.05068	.1768	.74329
	(.00304)	(.01121)	(.04953)	(.00066)				
	.11284	-.08372	.28570	.03392	-.00053	6.82147	.1852	.73952
	(.00305)	(.01121)	(.04929)	(.00256)	(.00005)			

Coefficients in brackets are less than 1.96 times their standard errors.

Table 13A: Regressions of Education on Background Characteristics for Civilian, Non-Institutional Males Aged 25-64 with Non-Zero Income: OCG Complete Data Sample (N=11,504)

	r	1		2		3		5	
		b (s.e.)	beta	b (s.e.)	beta	b (s.e.)	beta	b (s.e.)	beta
White	.210	1.05318 (.10281)	.084	1.08070 (.10294)	.086	1.19017 (.10082)	.095	1.18872 (.10072)	.095
Father's Education	.428	.23172 (.00838)	.246	.23023 (.00840)	.245	.20916 (.00827)	.222	.20671 (.00827)	.220
Father's Occupation	.417	.02454 (.00237)	.136	.02410 (.00237)	.134	.02368 (.00231)	.132	.02403 (.00231)	.134
Father White Collar	.374	.83752 (.11070)	.094	.82606 (.11056)	.093	.91418 (.10823)	.103	.91429 (.10808)	.103
Father Absent	-.108	-1.02685 (.07971)	-.101	-1.06691 (.08049)	-.105	-.99095 (.07882)	-.097	-.98465 (.07871)	-.097
Non-Farm Upbringing	.212	.62452 (.07438)	.069	.60430 (.07455)	.067	.47439 (.07316)	.052	.46205 (.07311)	.051
Non-South Upbringing	.218	.65333 (.06691)	.081	.64700 (.06688)	.080	.72984 (.06553)	.090	.72596 (.06546)	.090
Siblings	-.332	-.20484 (.00971)	-.175	-.20574 (.00971)	-.175	-.18502 (.00955)	-.158	-.18667 (.00954)	-.159
Father's Occupation^2	-.017			[-.00012] (.00006)	[-.015]	[-.00010] (.00006)	[-.013]	[-.00010] (.00006)	[-.013]
Siblings^2	.081			.01261 (.00227)	.043	.00998 (.00222)	.034	.01036 (.00222)	.036
Age	-.243					-.06033 (.00265)	-.175	-.05991 (.00265)	-.174
White x Age	.053							.04456 (.00886)	.038
Father's Occ. x Age	.027							.00033 (.00013)	.019

Table 13A:

	1	2	3	5
Constant	7.40376	7.58126	10.10872	12.18195
R^2	.3163	.3183	.3477	.3497
Residual S.D.	3.05198	3.04763	2.98150	2.97707

Coefficients in brackets are less than 1.96 times their standard errors.

Table 13B: Regressions of Education on Background Characteristics for Civilian, Non-Institutional Males Aged 25-64 with Non-Zero Income, Separately by Race: OCG Complete Data Sample (N=11,504)

	White B (s.e.)	r	Non-White B (s.e.)	r
Father's Education	.19957 (.00856)	.414	.23967 (.02941)	.392
Father's Occupation	.02546 (.00233)	.418	.02476 (.01256)	.248
Father White Collar	.92989 (.10850)	.378	[.71622] (.60726)	.222
Father Absent	-.85882 (.08338)	-.078	-1.35765 (.22919)	-.099
Non South Upbringing	.68250 (.06808)	.159	1.14322 (.22656)	.229
Non Farm Upbringing	.30710 (.07583)	.200	1.93862 (.25308)	.323
Siblings	-.20025 (.01011)	-.334	-.10292 (.02906)	-.180
Age	-.05681 (.00274)	-.246	-.09344 (.00980)	-.338
Constant	11.27414		9.60998	
R^2	.3214		.3277	
SD of Residual	2.92683		3.36818	
N	10394		1110	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 13C: Regressions of Education on Background Characteristics for OCG Men Aged 25-64 with Complete Data on All Variables and Non-Zero Income by Age (N=11,504)

	Age 25-34		Age 35-44		Age 45-54		Age 55-64	
	B (s.e.)	r	B (s.e.)	r	B (s.e.)	r	B (s.e.)	r
White	.74144 (.16458)	.203	1.02336 (.18272)	.222	1.33653 (.21741)	.222	2.07003 (.27907)	.273
Father's Education	.21457 (.01510)	.436	.20601 (.01503)	.421	.19920 (.01614)	.387	.22598 (.02165)	.407
Father's Occupation	.02052 (.00396)	.423	.02519 (.00411)	.429	.03083 (.00469)	.418	.01890 (.00674)	.377
Father White Collar	.86945 (.18502)	.386	.87370 (.19347)	.387	.94381 (.21825)	.380	1.14248 (.31435)	.342
Father Absent	-.75023 (.13911)	-.086	-.98461 (.14373)	-.114	-.96252 (.15300)	-.113	-1.21034 (.20750)	-.121
Non South Upbringing	.64343 (.11214)	.217	.75190 (.11950)	.242	.66034 (.13518)	.225	.94755 (.17557)	.236
Non Farm Upbringing	.43006 (.14163)	.182	.40255 (.13350)	.198	.51559 (.14294)	.211	.59264 (.17604)	.188
Siblings	-.16343 (.01707)	-.319	-.21988 (.01746)	-.344	-.19257 (.01932)	-.320	-.15219 (.02432)	-.249
Age	[-.01583] (.01710)	-.036	-.05124 (.01763)	-.067	-.11179 (.01969)	-.095	-.06676 (.02662)	-.040
Constant	9.03169		10.06097		12.44844		8.96527	
R^2	.3063		.3254		.3159		.2973	
SD of Residual	2.76053		2.94180		3.05041		3.25139	
N	3166		3443		2951		1994	

Coefficients in brackets are less than 1.96 times their standard errors.

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Table 13D: Regressions of Education on Background Characteristics for Civilian, Non-Institutional Males Aged 25-64 with Non-Zero Income, Separately by Father's Occupation: OCG Complete Data Sample (N=11,504)

	Father White Collar		Father Blue Collar		Father Farm	
	B (s.e.)	r	B (s.e.)	r	B (s.e.)	r
White	1.05403 (.30859)	.088	[.20889] (.16279)	.088	1.60481 (.16516)	.260
Father's Education	.16195 (.01434)	.337	.14937 (.01289)	.259	.32124 (.01647)	.405
Father's Occupation	.02379 (.00342)	.251	.02797 (.00312)	.208	.09544 (.02335)	.113
Father Absent	[-.23353] (.17789)	-.014	-.78895 (.13615)	-.074	-.92505 (.17718)	-.096
Non South Upbringing	.41482 (.13405)	.100	.79270 (.10470)	.145	.49850 (.11322)	.182
Non Farm Upbringing	1.45725 (.30418)	.125	.70328 (.19713)	.086	[-.15857] (.11111)	-.054
Siblings	-.21275 (.02188)	-.273	-.18104 (.01428)	-.254	-.15751 (.01685)	-.241
Age	-.04778 (.00507)	-.231	-.05810 (.00404)	-.226	-.06824 (.00505)	-.224
Constant	10.36291		11.00112		8.34989	
R^2	.2150		.1793		.2731	
Residual SD	2.73654		2.90534		3.04700	
N	2631		4915		3288	

Coefficients in brackets are less than 1.96 times their standard errors.

B 57

Table 14A: Regressions of Occupation on Background Characteristics, Education and Experience for Civilian, Non-Institutional Males Aged 25-64 with Non-Zero Income: OCG Complete Data Sample (N=11,504)

	r	1		2		5	
		b	Beta	b	Beta	b	Beta
White	.234	12.34867 (.72990)	.147	12.66380 (.73191)	.150	12.74140 (.73201)	.151
Father's Education	.321	.80720 (.05947)	.127	.83455 (.06012)	.132	.82970 (.06011)	.131
Father's Occupation	.402	.23068 (.01681)	.190	.22038 (.01690)	.182	.22386 (.01693)	.185
Father White Collar	.356	5.33289 (.78593)	.089	4.99263 (.78742)	.084	4.90597 (.78756)	.082
Father Absent	-.078	-4.21574 (.56592)	-.061	-4.49844 (.57129)	-.066	-4.41609 (.57163)	-.064
Non-Farm Upbringing	.209	5.28922 (.52809)	.087	5.11892 (.52916)	.084	5.16836 (.52917)	.085
Non-South Upbringing	.160	1.33523 (.47500)	.024	1.27250 (.47470)	.023	1.27428 (.47450)	.023
Siblings	-.262	-.94964 (.06894)	-.120	-.95741 (.06896)	-.121	-.94749 (.06900)	-.120
Father's Occupation^2	-.028			-.00154 (.00046)	-.029	-.00183 (.00047)	-.034
Father's Education^2	.081			.04073 (.00985)	.036	.03815 (.00988)	.034
Siblings^2	.068			.07052 (.01610)	.036	.05831 (.01653)	.030
Father's Occ. x Siblings	-.028					-.01218 (.00379)	-.028
Education	.609						
Years of Higher Ed.	.581						
B.A.	.530						
Experience	-.207						
Experience^2	.055						

B 58

Table 14A:

	r	1	2	5
Education x Experience	-.113			
Education x Siblings	-.098			
Siblings x Higher Ed.	.026			
Constant		12.75233	14.78237	12.77141
R^2		.2416	.2444	.2451
S.D. of Residual		21.66765	21.63030	21.62151

B 59

Table 14A:

	6		7		8	
	b	Beta	b	Beta	b	Beta
White	10.03129 (.63027)	.119	9.44850 (.62877)	.112	9.43367 (.62723)	.112
Father's Education	.10441 (.05308)	.016	.13507 (.05295)	.021	.14230 (.05285)	.022
Father's Occupation	.12434 (.01457)	.103	.12395 (.01449)	.102	.12383 (.01446)	.102
Father White Collar	[1.15794] (.67652)	[.019]	[.81633] (.67337)	[.014]	[.75652] (.67176)	[.013]
Father Absent	-1.36790 (.49327)	-.020	-1.42978 (.49073)	-.021	-1.33066 (.49102)	-.019
Non-Farm Upbringing	3.80140 (.45477)	.062	4.11440 (.45303)	.067	4.14319 (.45180)	.068
Non-South Upbringing	[-.40080] (.40820)	[-.007]	[-.79337] (.40735)	[-.015]	-.80953 (.40625)	-.015
Siblings	-.27673 (.06018)	-.035	-.31600 (.05995)	-.040	-.31954 (.05988)	-.040
Father's Occupation^2	-.00202 (.00040)	-.038	-.00203 (.00040)	-.038	-.00193 (.00040)	-.036
Father's Education^2	[.00659] (.00856)	[.006]	[.00612] (.00852)	[.005]	[.00341] (.00851)	[.003]
Siblings^2	[.00642] (.01417)	[.003]	[.01311] (.01410)	[.007]	[.00307] (.01463)	[.002]
Father's Occ. x Siblings	[-.00540] (.00325)	[-.012]	[-.00600] (.00324)	[-.014]	[-.00497] (.00341)	[-.011]
Education	1.98762 (.07872)	.295	2.31467 (.08396)	.343	2.59240 (.09180)	.385
Years of Higher Ed.	2.92822 (.28405)	.206	2.81046 (.28388)	.198	1.97610 (.30082)	.139
B.A.	5.71039 (1.23408)	.080	5.84425 (1.22732)	.082	6.09415 (1.22801)	.085
Experience			.19191 (.01671)	.091	.19376 (.01668)	.092
Experience^2			[.00065] (.00122)	[.004]	-.00538 (.00155)	-.031
Experience x B.A.						

B60

Table 14A:

	6	7	8	
			b	Beta
Education x Experience			-.03593 (.00566)	-.064
Education x Siblings			-.10651 (.02272)	-.049
Siblings x Higher Ed.			.25373 (.05307)	.046
Constant	-3.96585	-11.15867	-31.68815	
R^2	.4475	.4538	.4570	
S.D. of Residual	18.49968	18.39558	18.34375	

Coefficients in brackets are less than 1.96 times their standard errors.

B61

Table 14B: Regressions of Occupation on Background Characteristics, Education and Experience for Civilian, Non-Institutional Males Aged 25-64 with Non-Zero Income, Separately by Race: OCG Complete Data Sample (N=11,504)

	White B (s.e.)	r	Non-White B (s.e.)	r
Father's Education	[.09838] (.05630)	.302	.31181 (.12453)	.267
Father's Occupation	.11612 (.01501)	.388	.12536 (.05131)	.294
Father White Collar	[.90865] (.69757)	.348	[-.10131] (2.50505)	.259
Father Absent	-1.07237 (.53603)	-.050	[-.82807] (.96509)	-.032
Non-South Upbringing	-1.60628 (.43858)	.085	5.88478 (.94574)	.276
Non-Farm Upbringing	5.06825 (.48583)	.217	[-.07503] (1.07082)	.158
Siblings	-.34253 (.06589)	-.252	[-.14889] (.12034)	-.145
Education	2.70835 (.09397)	.605	.80443 (.15184)	.467
Years of Higher Education	2.36459 (.29875)	.577	3.50887 (.86618)	.583
B.A.	5.22122 (1.28345)	.526	21.10292 (4.01200)	.557
Experience	.20670 (.01783)	-.213	.10339 (.04253)	-.171
Experience^2	[.00161] (.00131)	.058	[-.00196] (.00305)	.034
Constant	-3.04690		2.80889	
R^2	.4285		.4253	
SD of Residual	18.71453		13.84362	
N	10394		1110	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 14 : Regressions of Occupation on Background Characteristics, Education and Experience for Civilian, Non-Institutionalized Males Aged 25-64 with Non-Zero Income, Separately by Age: OCG Complete Data Sample (N=11,504)

	Age 25-34		Age 35-44		Age 45-54		Age 55-64	
	B (s.e.)	r	B (s.e.)	r	B (s.e.)	r	B (s.e.)	r
White	9.55003 (1.05277)	.252	8.78141 (1.14889)	.220	11.57332 (1.32555)	.238	7.25229 (1.69901)	.229
Father's Education	.29208 (.09932)	.368	[.07792] (.09602)	.325	[-.14220] (.10005)	.255	[.24963] (.13313)	.322
Father's Occupation	.07073 (.02555)	.410	.09282 (.02580)	.408	.16410 (.02863)	.391	.20996 (.04019)	.382
Father White Collar	[1.49317] (1.18808)	.377	[1.96685] (1.20994)	.367	[.50969] (1.32424)	.340	[-1.84602] (1.87581)	.316
Father Absent	[-1.05896] (.89085)	-.064	-2.19075 (.90110)	-.092	[.47080] (.93033)	-.073	[-2.15604] (1.24645)	-.080
Non South Upbringing	[.06955] (.72071)	.171	-2.01252 (.74891)	.151	[-1.60094] (.82116)	.147	[.92745] (1.05569)	.179
Non Farm Upbringing	4.42910 (.90585)	.190	5.09424 (.83298)	.218	3.39594 (.86796)	.200	4.70984 (1.05032)	.225
Siblings	-.33743 (.11042)	-.281	-.23506 (.11110)	-.274	-.27223 (.11867)	-.244	-.42876 (.14613)	-.221
Education	2.38463 (.19124)	.663	2.36598 (.16471)	.636	2.28464 (.17444)	.587	2.20817 (.21158)	.567
Years of Higher Education	3.47795 (.48536)	.668	2.27947 (.50291)	.602	2.33415 (.58036)	.522	3.45291 (.85346)	.446
BA	8.24580 (1.96966)	.620	8.06333 (2.19402)	.558	[3.26743] (2.64723)	.462	[-7.29410] (3.84481)	.374
Experience	.39949 (.10707)	-.458	[-.04813] (.10691)	-.494	[.02506] (.11625)	-.437	[.04318] (.14992)	-.403
Constant	-15.17308		-2.35248		-4.11431		-2.71911	
R^2	.5302		.4733		.4054		.3796	
Residual SD	17.58584		18.30228		18.41406		19.32805	
N	3166		3443		2951		1994	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 14b: Regressions of Occupation on Background Characteristics, Education and Experience for Civilian, Non-Institutional Males Aged 25-64 with Non-Zero Income, Separately by Father's Occupation: OCG Complete Data Sample (N=11,504)

	Father White Collar		Father Blue Collar		Father Farm	
	B (s.e.)	r	B (s.e.)	r	B (s.e.)	r
White	11.02557 (2.15135)	.131	10.62530 (1.04561)	.189	7.74125 (.94994)	.226
Father's Education	[.12025] (.10213)	.232	.19740 (.08442)	.167	.22342 (.09849)	.210
Father's Occupation	.05738 (.02401)	.201	.13654 (.02021)	.211	[.09421] (.13218)	.080
Father Absent	-3.38110 (1.23663)	-.058	[.41849] (.87757)	-.036	[-.33339] (1.00530)	-.054
Non South Upbringing	[-.14504] (.93308)	.068	[.48850] (.67725)	.145	-3.15141 (.64295)	.037
Non Farm Upbringing	[2.59296] (2.12701)	.083	[2.29897] (1.26777)	.073	2.03717 (.62744)	-.004
Siblings	-.72327 (.15507)	-.219	-.38739 (.09317)	-.193	[.07377] (.09649)	-.113
Education	2.87930 (.31721)	.582	2.60350 (.13637)	.539	1.94323 (.12823)	.480
Years of Higher Education	1.63494 (.57146)	.569	2.22140 (.46580)	.518	3.16834 (.64725)	.464
BA	3.72906 (1.87143)	.521	10.99099 (2.09390)	.478	10.18513 (3.08907)	.428
Experience	.17115 (.03835)	-.209	.23117 (.02658)	-.127	.22229 (.03132)	-.095
Experience^2	[.00307] (.00271)	.086	[.00124] (.00200)	.061	[-.00182] (.00220)	-.008
Constant	-6.21466		-13.16366		-8.10371	
R^2	.3712		.3741		.3137	
Residual SD	19.00439		18.64668		17.19720	
N	2631		4915		3288	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 15A: Regressions of Income on Background Characteristics, Education, Experience and Occupation for Civilian, Non-Institutional Males Aged 25-64 with Non-Zero Income: (OCG Complete Data Sample (N=11,504)

B4

	r	1		2		5		6	
		b	Beta	b	Beta	b	Beta	b	Beta
White	.214	2028.76 (135.31)	.138	2091.58 (135.74)	.142	2011.56 (136.68)	.137	1712.98 (132.52)	.116
Father's Education	.220	71.23 (11.02)	.064	75.07 (11.09)	.067	75.42 (11.09)	.068	[.80] (11.01)	[.001]
Father's Occupation	.301	33.26 (3.12)	.157	31.37 (3.14)	.148	31.65 (3.13)	.149	22.45 (3.03)	.106
Father White Collar	.260	576.69 (145.69)	.055	519.29 (146.01)	.050	515.00 (145.88)	.049	[168.53] (141.03)	[.016]
Father Absent	-.063	-485.65 (104.91)	-.041	-475.92 (104.98)	-.040	-438.65 (105.19)	-.037	[-109.73] (102.10)	[-.009]
Non-Farm Upbringing	.166	746.41 (97.90)	.070	747.64 (97.82)	.070	742.83 (97.74)	.070	586.09 (94.59)	.055
Non-South Upbringing	.185	782.80 (88.05)	.082	785.81 (87.96)	.082	800.04 (87.94)	.084	611.41 (85.14)	.064
Siblings	-.184	-96.72 (12.78)	-.070	-99.62 (12.78)	-.072	-101.02 (12.77)	-.073	-32.31 (12.54)	-.023
Father's Education^2	.077			7.92 (1.76)	.040	7.57 (1.76)	.038	5.46 (1.73)	.028
Siblings^2	.042			7.39 (2.99)	.022	7.07 (2.98)	.021	[1.68] (2.88)	[.005]
Father's Occ. x White	.059					43.81 (9.36)	.041	41.73 (9.02)	.039
Education	.399							250.28 (16.37)	.212
Years of Higher Ed.	.350							[70.54] (59.20)	[.028]
B.A.	.322							1042.42 (257.44)	.083

Table 15A:

	r	1	2	5	6
Experience	-.072				
Experience^2	-.106				
Father's Occ. x B.A.	-.003				
Education x Siblings	-.057				
Father's Occ. x Experience	.050				
Education x Experience	.041				
Experience x Higher Ed.	.128				
Occupation	.481				
Constant		1982.75	2509.95	3268.80	1164.77
R^2		.1474	.1494	.1510	.2130
S.D. of Residual		4016.69	4012.39	4008.74	3859.99

Table 15A:

	7		8		9	
	b	Beta	b	Beta	b	Beta
White	1569.54 (130.21)	.107	1623.56 (130.08)	.110	1098.51 (126.17)	.075
Father's Education	[20.21] (10.82)	[.018]	[17.01] (10.85)	[.015]	[9.04] (10.43)	[.008]
Father's Occupation	22.22 (2.97)	.105	21.72 (2.96)	.103	14.76 (2.86)	.070
Father White Collar	[78.43] (138.23)	[.008]	[83.23] (137.97)	[.008]	[40.91] (132.60)	[.004]
Father Absent	[-171.04] (100.01)	[-.014]	[-135.30] (100.19)	[-.011]	[-70.61] (96.31)	[-.006]
Non-Farm Upbringing	659.93 (92.78)	.062	646.77 (92.62)	..061	407.88 (89.34)	.038
Non-South Upbringing	531.23 (83.66)	.056	541.97 (83.46)	.057	585.24 (80.22)	.061
Siblings	-46.89 (12.30)	-.034	-47.74 (12.28)	-.035	-29.55 (11.82)	-.021
Father's Education^2	5.80 (1.69)	.029	4.60 (1.72)	.023	4.22 (1.65)	.021
Siblings^2	[4.11] (2.82)	[.012]	[1.70] (2.98)	[.005]	[1.41] (2.97)	[.004]
Father's Occ. x White	45.90 (8.83)	.043	41.25 (8.85)	.039	38.12 (8.50)	.035
Education	291.23 (17.20)	.247	315.58 (18.96)	.268	174.71 (18.78)	.148
Years of Higher Education	137.99 (58.26)	.056	[55.49] (62.82)	[.022]	[-91.17] (60.55)	[-.037]
B.A.	1139.93 (252.12)	.091	1168.98 (252.80)	.093	864.77 (243.15)	.069

Table 15A:

	7		8		9	
	b	Beta	b	Beta	b	Beta
Experience	50.47 (3.43)	.138	49.29 (3.44)	.134	37.90 (3.33)	.103
Experience^2	-4.25 (.25)	-.141	-4.09 (.32)	-.135	-3.76 (.31)	-.124
Father's Occ. x B.A.			20.53 (4.67)	.039	29.74 (4.49)	.056
Education x Siblings			-10.05 (3.51)	-.027	-7.12 (3.38)	-.019
Father's Occ. x Experience			.74 (.17)	.041	.61 (.16)	.034
Education x Experience			-5.50 (1.52)	-.056	-4.66 (1.46)	-.048
Experience x Higher Education			14.29 (2.86)	.060	18.88 (2.75)	.080
Occupation					56.99 (1.85)	.326
Constant	-2470.92		-3982.82		-2827.62	
R^2	.2456		.2500		.3074	
S.D. of Residual	3779.59		3769.51		3622.57	

Coefficients in brackets are less than 1.96 times their standard errors.

B68

Table 15B: Regressions of Income on Background Characteristics, Education, and Experience for Civilian, Non-Institutional Males Aged 25-64 with Non-Zero Income, Separately by Race: OCG Complete Data Sample (N=11,504)

	White B (s.e.)	r	Non-White B (s.e.)	r
Father's Education	[15.99] (11.79)	.199	[28.23] (18.31)	.175
Father's Occupation	24.05 (3.14)	.286	[-8.60] (7.62)	.103
Father White Collar	[125.03] (146.04)	.250	[-174.09] (368.23)	.101
Father Absent	[-176.91] (112.22)	-.035	[-120.24] (141.86)	-.040
Non-South Upbringing	516.17 (91.82)	.129	573.97 (139.02)	.200
Non-Farm Upbringing	690.05 (101.71)	.166	561.24 (157.40)	.216
Siblings	-47.07 (13.80)	-.168	[-20.56] (17.67)	-.113
Education	306.49 (19.67)	.376	191.83 (22.32)	.390
Years of Higher Education	150.88 (62.55)	.339	[-96.30] (127.32)	.304
B.A.	1092.21 (268.71)	.313	2099.77 (589.74)	.294
Experience	51.84 (3.73)	-.070	32.86 (6.25)	-.089
Experience^2	-4.46 (.27)	-.113	-1.47 (.45)	-.053
Constant	-2378.03		-480.54	
R^2	.2099		.2188	
SD of Residual	3918.12		2034.92	
N	10,394		1,110	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 16A: Regressions of Ln Income on Background Characteristics, Education, Experience and Occupation for Civilian, Non-Institutional Males Aged 25-64 with Non-Zero Income: OCG Complete Data Sample (N=11,504)

	r	1		2		5		6	
		b	Beta	b	Beta	b	Beta	b	Beta
White	.280	.57461 (.02522)	.207	.57696 (.02527)	.208	.56879 (.02545)	.205	.48618 (.02466)	.175
Father's Education	.219	.01723 (.00206)	.082	.01705 (.00206)	.081	.01712 (.00206)	.082	[.00177] (.00204)	[.008]
Father's Occupation	.253	.00414 (.00058)	.103	.00410 (.00058)	.103	.00412 (.00058)	.103	.00278 (.00056)	.070
Father White Collar	.211	[.04445] (.02716)	[.023]	[.04378] (.02716)	[.022]	[.04309] (.02716)	[.022]	[-.00116] (.02623)	[-.001]
Father Absent	-.077	-.11012 (.01956)	-.049	-.11133 (.01957)	-.049	-.10734 (.01963)	-.048	[-.03598] (.01901)	[-.016]
Non-Farm Upbringing	.191	.22712 (.01825)	.113	.22657 (.01825)	.113	.22610 (.01825)	.112	.17973 (.01763)	.089
Non-South Upbringing	.216	.16755 (.01641)	.093	.16753 (.01641)	.093	.16903 (.01642)	.094	.12081 (.01587)	.067
Siblings	-.184	-.01760 (.00238)	-.068	-.01772 (.00238)	-.068	-.01787 (.00238)	-.069	[-.00408] (.00234)	[-.016]
Siblings^2	.025			[.00084] (.00056)	[.013]	[.00081] (.00056)	[.013]	[.00008] (.00054)	[.001]
Father's Occ. x White	.049					.00458 (.00175)	.023	.00521 (.00168)	.026
B.A.	.245							.27163 (.04799)	.115
Education	.404							.07780 (.00302)	.350
Years of Higher Ed.	.264							-.08218 (.01097)	-.176

Table 16A:

	r	1	2	5	6
Experience	-.116				
Experience^2	-.097				
Education x White	-.035				
White x Experience	.016				
Occupation	.434				
Constant		7.47455	7.49375	7.57472	6.99526
R^2		.1649	.1651	.1656	.2290
S.D. of Residual		.74878	.74874	.74855	.71963

B70

Table 16A:

	7		8		9	
	b	Beta	b	Beta	b	Beta
White	.46998 (.02451)	.169	.46899 (.02450)	.169	.38221 (.02405)	.138
Father's Education	.00421 (.00203)	.020	.00441 (.00203)	.021	[.00339] (.00197)	[.016]
Father's Occupation	.00276 (.00056)	.069	.00281 (.00056)	.070	.00173 (.00054)	.043
Father White Collar	[-.01119] (.02601)	[-.006]	[-.01089] (.02600)	[-.006]	[-.01910] (.02527)	[-.010]
Father Absent	-.04414 (.01884)	-.020	-.04322 (.01883)	-.019	[-.03242] (.01831)	[-.014]
Non-Farm Upbringing	.18797 (.01749)	.094	.18523 (.01751)	.092	.14467 (.01709)	.072
Non-South Upbringing	.11217 (.01577)	.062	.11310 (.01577)	.063	.11977 (.01533)	.067
Siblings	-.00582 (.00232)	-.022	-.00595 (.00232)	-.023	[-.00310] (.00226)	[-.012]
Siblings^2	[.00037] (.00053)	[.006]	[.00040] (.00053)	[.006]	[.00026] (.00052)	[.004]
Father's Occ. x White	.00572 (.00166)	.028	.00704 (.00173)	.035	.00756 (.00168)	.037
B.A.	.28401 (.04753)	.120	.28229 (.04752)	.120	.22924 (.04623)	.097
Education	.08140 (.00322)	.367	.07990 (.00329)	.360	.05745 (.00331)	.259
Years of Higher Education	-.07212 (.01092)	-.154	-.06854 (.01101)	-.147	-.09154 (.01074)	-.196

Table 16A:

	7		8		9	
	b	Beta	b	Beta	b	Beta
Experience	.00575 (.00065)	.083	.00570 (.00065)	.083	.00393 (.00063)	.057
Experience^2	-.00058 (.00005)	-.102	-.00059 (.00005)	-.104	-.00060 (.00005)	-.106
Education x White			-.02251 (.00694)	-.033	-.03393 (.00676)	-.049
White x Experience			-.00601 (.00223)	-.026	-.00684 (.00217)	-.029
Occupation					.00913 (.00035)	.277
Constant	6.53871		6.26325		6.25654	
R^2	.2440		.2448		.2866	
S.I. of Residual	.71266		.71235		.69236	

Coefficients in brackets are less than 1.96 times their standard errors.

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Table 16B: Regressions of Ln Income on Background Characteristics, Education, and Experience for Civilian, Non-Institutional Males Aged 25-64 with Non-Zero Income, Separately by Race: OCG Complete Data Sample (N=11,504)

	White B (s.e.)	r	Non-White B (s.e.)	r
Father's Education	[.00287] (.00209)	.187	.01908 (.00762)	.197
Father's Occupation	.00322 (.00056)	.242	-.00732 (.00317)	.070
Father White Collar	[-.01253] (.02595)	.203	[.09324] (.15337)	.084
Father Absent	-.05981 (.01994)	-.048	[.06744] (.05909)	.005
Non South Upbringing	.12028 (.01631)	.151	[.06693] (.05790)	.114
Non Farm Upbringing	.18062 (.01807)	.191	.20765 (.06556)	.214
Siblings	-.00583 (.00245)	-.162	[-.00404] (.00736)	-.104
Education	.07706 (.00350)	.365	.10200 (.00930)	.388
Years of Higher Education	-.06150 (.01111)	.256	-.17755 (.05303)	.189
B.A.	.25215 (.04774)	.238	.82213 (.24563)	.187
Experience	.00509 (.00066)	-.118	.01133 (.00260)	-.115
Experience^2	-.00061 (.00005)	-.109	[-.00035] (.00019)	-.052
Constant	6.95289		6.28240	
R^2	.1805		.1913	
SD of Residual	.69611		.84756	
N	10,394		1,110	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 15C: Regressions of Ln Income on Background Characteristics, Education and Experience for Civilian, Non-Institutional Males Aged 25-64 with Non-Zero Income, Separately by Age: OCG Complete Data Sample (N=11,504)

	Age 25-34		Age 35-44		Age 45-54		Age 55-64	
	B (s.e.)	r	B (s.e.)	r	B (s.e.)	r	B (s.e.)	r
White	.51034 (.03887)	.304	.53959 (.04033)	.317	.45916 (.05633)	.258	.33645 (.07028)	.242
Father's Education	.00920 (.00367)	.211	[.00553] (.00337)	.253	[.00249] (.00425)	.204	[.00051] (.00551)	.219
Father's Occupation	[.00174] (.00094)	.228	.00296 (.00091)	.296	.00452 (.00122)	.265	[.00090] (.00166)	.222
Father White Collar	[.00006] (.04387)	.191	[-.02520] (.04247)	.240	[-.03067] (.05627)	.219	[.05486] (.07759)	.196
Father Absent	-.07413 (.03289)	-.070	[-.03596] (.03163)	-.087	[-.05909] (.03953)	-.094	[.01353] (.05156)	-.049
Non South Upbringing	[.04173] (.02661)	.179	.05604 (.02629)	.216	.14403 (.03489)	.226	.25622 (.04367)	.259
Non Farm Upbringing	.19769 (.03344)	.169	.20779 (.02924)	.207	.14463 (.03688)	.182	.22384 (.04345)	.204
Siblings	-.01017 (.00408)	-.194	[.00159] (.00390)	-.193	[-.00466] (.00504)	-.185	[-.00552] (.00604)	-.154
Education	.10035 (.00706)	.334	.08621 (.00578)	.456	.07349 (.00741)	.416	.09510 (.00875)	.426
Years of Higher Education	-.11198 (.01792)	.227	-.07576 (.01765)	.314	[-.03516] (.02466)	.274	[-.04806] (.03530)	.251
BA	.41729 (.07272)	.235	.31971 (.07702)	.298	[.07828] (.11249)	.235	[.10240] (.15904)	.217
Experience	.04000 (.00395)	-.124	.00761 (00375)	-.309	[-.00760] (.00494)	-.310	.01289 (.00620)	-.256
Constant	6.10757		6.64194		7.22804		6.24749	
R^2	.2281		.2849		.2255		.2361	
Residual SD	.64929		.64247		.78246		.79951	
N	3166		3443		2951		1994	

Coefficients in brackets are less than 1.96 times their standard errors.

B75

Table 16D: Regressions of Ln Income on Background Characteristics, Education and Experience for Civilian, Non-Institutional Males Aged 25-64 with Non-Zero Income, Separately by Father's Occupation: OCG Complete Data Sample (N=11,504)

	Father White Collar		Father Blue Collar		Father Farm	
	B (s.e.)	r	B (s.e.)	r	B (s.e.)	r
White	.65201 (.07768)	.180	.45784 (.03524)	.248	.43247 (.04591)	.262
Father's Education	[-.00057] (.00369)	.101	[.00482] (.00285)	.106	[.00917] (.00476)	.199
Father's Occupation	.00315 (.00087)	.139	.00178 (.00068)	.136	[-.00549] (.00639)	.036
Father Absent	[-.05412] (.04465)	-.035	-.10054 (.02958)	-.084	[-.02093] (.04859)	-.055
Non South Upbringing	.12606 (.03369)	.120	.09963 (.02283)	.192	.10901 (.03108)	.161
Non Farm Upbringing	[.12969] (.07680)	.068	.14764 (.04273)	.091	.08463 (.03033)	.007
Siblings	-.01183 (.00560)	-.105	[-.00540] (.00314)	-.118	[.00167] (.00466)	-.106
Education	.05018 (.01145)	.273	.07620 (.00460)	.309	.08633 (.00620)	.364
Years of Higher Education	[-.02298] (.02063)	.245	-.07495 (.01570)	.172	-.08254 (.03128)	.187
BA	.25117 (.06757)	.244	.25999 (.07057)	.160	.38211 (.14931)	.173
Experience	.00462 (.00138)	-.015	.00576 (.00090)	-.038	.00512 (.00151)	-.103
Experience^2	-.00085 (.00010)	-.151	-.00048 (.00007)	-.099	-.00041 (.00011)	-.089
Constant	6.56681		6.65829		6.54630	
R^2	.1565		.1789		.1770	
Residual SD	.68617		.62848		.83122	
N	2631		4915		3288	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 17: Regressions of Income$^{1/3}$ on Background Characteristics, Education, Experience and Occupation for Civilian, Non-Institutional Males Aged 25-64 with Non-Zero Income: OCG Complete Data Sample (N=11,504)

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	r	1		2		5		6	
		b	Beta	b	Beta	b	Beta	b	Beta
White	.276	2.71476 (.12546)	.195	2.74128 (.12597)	.197	2.68590 (.12691)	.193	2.30127 (.12229)	.165
Father's Education	.235	.08487 (.01022)	.081	.08514 (.01030)	.081	.08539 (.01029)	.082	[.00627] (.01016)	[.006]
Father's Occupation	.290	.02669 (.00289)	.133	.02605 (.00291)	.130	.02624 (.00291)	.131	.01794 (.00280)	.090
Father White Collar	.244	.34314 (.13509)	.035	.32523 (.13551)	.033	.32226 (.13544)	.033	[.03318] (.13015)	[.003]
Father Absent	-.079	-.56868 (.09728)	-.050	-.57127 (.09743)	-.050	-.54548 (.09767)	-.048	[-.17638] (.09422)	[-.016]
Non-Farm Upbringing	.194	1.03915 (.09077)	.103	1.03712 (.09079)	.103	1.03379 (.09075)	.102	.81849 (.08729)	.081
Non-South Upbringing	.222	.88952 (.08165)	.098	.89020 (.08164)	.099	.90004 (.08165)	.100	.66597 (.07857)	.074
Siblings	-.199	-.09783 (.01185)	-.075	-.09911 (.01186)	-.076	-.10007 (.01186)	-.076	-.02779 (.01157)	-.021
Father's Education^2	.039			[.00208] (.00164)	[.011]	[.00183] (.00164)	[.010]	[.00248] (.00159)	[.013]
Siblings^2	.033			.00554 (.00277)	.017	[.00532] (.00277)	[.016]	[.00079] (.00266)	[.002]
Father's Occ. x White	.055					.03031 (.00869)	.029	.03138 (.00832)	.031
Education	.432							.35835 (.01511)	.322
Years of Higher Ed.	.317							-.25188 (.05463)	-.107

Table 17:

	r	1	2	5	6 b	6 Beta
B.A.	.293				1.30305 (.23759)	.110
Experience	-.108					
Experience^2	-.108					
Father's Occ. x B.A.	-.033					
Father's Occ. x Experience	.049					
Education x Experience	.065					
Experience x Higher Ed.	.114					
Occupation	.488					
Constant		12.45530	12.67564	13.20074	10.50057	
R^2		.1805	.1809	.1817	.2507	
S.D. of Residual		3.72446	3.72386	3.72205	3.56229	

B 77

Table 17:

	7		8		9	
	b	Beta	b	Beta	b	Beta
White	2.19455 (.12077)	.158	2.21935 (.12089)	.159	1.72754 (.11718)	.124
Father's Education	.02191 (.01003)	.021	.02177 (.01007)	.021	[.01406] (.00968)	[.013]
Father's Occupation	.01776 (.00275)	.089	.01749 (.00275)	.087	.01096 (.00265)	.055
Father White Collar	[-.03487] (.12820)	[-.004]	[-.02576] (.12816)	[-.003]	[-.06849] (.12310)	[-.007]
Father Absent	-.22677 (.09276)	-.020	-.22465 (.09273)	-.020	[-.15707] (.08909)	[-.014]
Non-Farm Upbringing	.87352 (.08605)	.087	.86776 (.08607)	.086	.64392 (.08298)	.064
Non-South Upbringing	.60745 (.07759)	.067	.61096 (.07756)	.068	.65119 (.07450)	.072
Siblings	-.03914 (.01141)	-.030	-.03826 (.01141)	-.029	[-.02148] (.01097)	[-.016]
Father's Education^2	[.00278] (.00157)	[.015]	[.00230] (.00159)	[.012]	[.00189] (.00153)	[.010]
Siblings^2	[.00266] (.00262)	[.008]	[.00284] (.00262)	[.009]	[.00180] (.00251)	[.006]
Father's Occ. x White	.03461 (.00819)	.034	.03323 (.00822)	.033	.03014 (.00790)	.030
Education	.38524 (.01595)	.346	.40374 (.01724)	.362	.27497 (.01707)	.247
Years of Higher Ed.	-.19226 (.05404)	-.082	-.25739 (.05785)	[illegible]	-.40122 (.05575)	-.171

Table 17:

	7		8		9	
	b	Beta	b	Beta	b	Beta
B.A.	1.38208 (.23384)	.117	1.40909 (.23491)	.119	1.12150 (.22580)	.095
Experience	.03807 (.00318)	.110	.03729 (.00319)	.108	.02673 (.00309)	.077
Experience^2	-.00360 (.00023)	-.126	-.00391 (.00029)	-.137	-.00359 (.00028)	-.126
Father's Occ. x B.A.			[.00775] (.00433)	[.015]	.01619 (.00417)	.032
Father's Occ. x Experience			.00035 (.00016)	.020	[.00022] (.00015)	[.013]
Education x Experience			-.00534 (.00141)	-.058	-.00449 (.00136)	-.049
Experience x Higher Ed.			.00811 (.00266)	.036	.01243 (.00256)	.056
Occupation					.05333 (.00172)	.323
Constant	7.59565		6.12021		7.04630	
R^2	.2745		.2757		.3320	
S.D. of Residual	3.50554		3.50310		3.36449	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 19: Calculation of the Orthogonal Squared and Interaction Terms Used in Tables 13-17

Father's Occupation^2 = Father's Occupation x (Father's Occupation - 79.3855)

Father's Education^2 = Father's Education x (Father's Education - 15.9905)

Siblings^2 = Siblings x (Siblings - 11.4493)

Experience^2 = Experience x (Experience - 50.4377)

White x Father's Occupation = White x Father's Occupation + (-17.4451 x White) + (-0.9636 x Father's Occupation)

White x Education = White x Education + (-8.8890 x White) + (-0.8920 x Education)

White x Experience = White x Experience + (-24.5001 x White) + (-0.9134 x Experience)

White x Age = White x Age + (-41.3209 x White) + (-0.9123 x Age)

Father's Occupation x Siblings = Father's Occupation x Siblings + (-3.4113 x Father's Occupation + (-23.5342 x Siblings)

Father's Occupation x College Graduation = Father's Occupation x College Graduation + (-0.2348 x Father's Occupation) + (-40.4021 x College Graduation)

Father's Occupation x Experience = Father's Occupation x Experience + (-21.9024 x Father's Occupation) + (-27.2683 x Experience)

Father's Occupation x Age = Father's Occupation x Age + (-41.7883 x Father's Occupation + (-27.4044 x Age)

Siblings x Education = Siblings x Education + (-10.3402 x Siblings) + (-4.3732 x Education)

Siblings x Higher Education = Siblings x Higher Education + (-0.6029 x Siblings) + (-3.0600 x Higher Education)

Education x Experience = Education x Experience + (-24.8649 x Education) + (-10.8697 x Experience)

Higher Education x Experience = Higher Education x Experience + (-17.5291 x Higher Education) + (-0.7508 x Experience)

Table 20 : F Values and Coefficient Signs for Interaction Terms if Entered in Multivariate Equations for Education, Occupation, Income, and Log Time, for OCG Men Age 25-64 with Complete Data on All Variables

	Education		Occupation		Income		Ln Income	
	Sign	Sig	Sign	Sig	Sign	Sig	Sign	Sig
Father's Occupation x White	-		+		+	* *	+	* *
Father's Occupation x Sibs	+		-		-		-	
Father's Occupation x Education	NA		-	* *	+	* *	-	
Father's Occupation x Higher Education	NA		-	* *	+	* *	+	
Father's Occupation x B.A.	NA		-	* *	+	* *	+	
Father's Occupation x Age	+	* *	NA		NA		NA	
Father's Occupation x Experience	NA		+		+	* *	+	
White x Sibs	-		-		-		+	
White x Education	NA		+	* *	+	* *	-	* *
White x Higher Education	NA		-		+		-	
White x B.A.	NA		-	*	+		-	
White x Age	+	* *	NA		NA		NA	
White x Experience	NA		-	* *	-		-	
Sibs x Education	NA		-	* *	-	*	-	
Sibs x Higher Education	NA		+		-		-	
Sibs x B.A.	NA		+		-		-	
Sibs x Age	-		NA		NA		NA	
Sibs x Experience	NA		+		+		+	
Education x Experience	NA		-	* *	+		-	*
Higher Education x Experience	NA		-	* *	+	* *	+	
B.A. x Experience	NA		-	* *	+	* *	+	

Source: OCGCDRI2, lst step after exrsgo entry

Legal: * F 3.84, PL.05 +b 0
**F 6.63, rL.01 -b 0

Footnote to Table 20:

This table is based on a sample slightly different from the complete-data subsample I used elsewhere. The difference is due to an error on my part. In a few initial analyses I failed to allocate mean Father's Occupation values to men who did not report that item and who had no fathers at home when they were 16. 69 of these 917 men also failed to report at least one other characteristic, so the sample used for this table differs from the correct subsample by 917 - 69 = 11,504 - 10,656 = 848 weighted cases. However, the means, standard deviations, and correlations were virtually identical for the two samples. I therefore have not recalculated the crude statistics reported here, which were used only to guide preparation of the multivariate tables I presented earlier.

APPENDIX C: THE 1965 "PRODUCTIVE AMERICANS" SURVEY

By Kent McClelland

INTRODUCTION

The Productive Americans data come from a survey conducted by the Survey Research Center at the University of Michigan. In the early months of 1965 SRC interviewed a total of 2214 male and female heads of households eighteen years of age and older. The sample, drawn by a multi-stage, stratified, cluster sampling of dwelling units, was designed to be nationally representative of the American public (except residents of Alaska and Hawaii). The survey had a response rate of about 84 percent. Further details of sample design, as well as an extensive analysis of the Productive Americans data relating to hours spent at work and in productive home activities (the original focus of the survey) can be found in a monograph by Morgan, Sirageldin and Baerwaldt (1966) and in Sirageldin (1969). 1/

Section 1 of this chapter contains a description of the Productive Americans basic sample; Section 2, definitions of the variables used in this analysis; and Section 3, a discussion of the univariate distributions of these variables. Section 4

1/ James N. Morgan, Ismail Sirageldin and Nancy Baerwaldt, Productive Americans. Ann Arbor: Survey Research Center, Monograph 43, University of Michigan, 1966, and Ismail Sirageldin, Non-Market Components of National Income, Ann Arbor: Survey Research Center, University of Michigan, 1969.

treats the question of item nonresponses, and in Section 5, I deal with the bivariate relationships between important background and dependent variables. In the final section of the chapter, I present a number of multivariate regression equations for the determination of educational attainment, occupational status, earnings and family income.

My main purpose, throughout the chapter, will be to compare the Productive Americans (PA) results to the results from the 1970 Census and the Occupational Changes in a Generation Survey (OCG). (See Appendices A and B).

1. SAMPLE DESCRIPTION

From the original sample of 2214 completed PA interviews I eliminated all cases in the following categories:

a. Female heads of households

b. Respondents under 25 or over 64 years of age at the time of the interview in 1965

c. Respondents reporting that they were at least half-time students in 1964

d. Respondents reporting a main occupation classified as "Members of the Armed Services"

e. Respondents not reporting positive earnings for 1964 (See definition of Annual Earnings in Table 1.)

These restrictions left a total of 1392 cases in the basic sample for analysis. For the bivariate and multivariate regression analyses I made use of a subset of this basic sample containing 1188 PA cases with complete data on most major variables (hereafter called the "complete data sample.") Because of peculiarities in the coding of PA variables, cases excluded from the complete data PA sample were more likely to be missing income information than other kinds of data. I will defer further discussion of the ways in which the PA complete data sample differs from other complete data samples until Section 4.

Except for the head of household restriction of the sample design and the departures from randomness inherent in cluster surveys, the basic PA sample corresponds well to the optimun sample definition set forth in Chapter 1. A sample restricted to heads of households loses an undetermined number of adult males living in households where they are not considered heads. Men living with their parents or older brothers are obvious examples. Such men may count for about 5 to 10 percent of the total potential sample, and they are systematically different from household heads, especially with respect to income. (For an analysis of these effects, see Appendix D). The PA sample has not been weighted to compensate for nonresponse or differences in sampling frame. The SRC cluster sampling technique results in larger standard errors for PA statistics. This is because each PA respondent was paired with another respondent from the same locality (to save time and transportation costs for interviewers). To the extent that respondents from the same neighborhood are more similar than random individuals, the efficiency of the cluster sample is less than for a fully random sample of the same size. SRC estimates the bias in the PA standard errors to be on the order of 20 percent, but as much as 50 percent for some variables. (See Morgan, Sirageldin and Baerwaldt, (1966). I have not attempted to make any correction for this bias. The standard errors presented in this chapter are calculated on the assumption that the sample was fully random. I have followed the convention of describing coefficients greater than twice their biased standard errors (or t-value greater than 2.0) as "statistically significant". The reader should, thus, attach a lower significance level to such statements (perhaps 0.10 rather than 0.05).

2. VARIABLE DEFINITIONS

Table 1 contains definitions of all the variables used in this analysis. Column 1 of Table 1 lists the name of the variable. Column 2 quotes the language of the question in the original questionnaire and the categories used by SRC in coding responses on the computer tape. In Column 3, I indicate my recoding of response categories. Column 4 contains the percentage of valid responses in each category. (Where variables were coded continuously, I created arbitrary categories for reporting frequencies.) The number of "Not Ascertained" responses for each variable is listed in Column 2.

I included a total of six background variables in the PA analysis. Four of these -- White, Father Foreign, Nonfarm Upbringing, and Nonsouth Upbringing -- lacked any clear metric and were recoded as dichotomous variables. The Siblings variable is simply the number of siblings up to seven, and a code of 9 for eight or more siblings. I recoded Father's Education to the approximate number of completed years of education. SRC assigned most of the nonrespondents a Father's Education value on the basis of a question about whether the respondent's father could read and write.

Conspicuously missing from the list of background variables for the PA dataset are Father's Occupation, Mother's Education, Parental Income, or information about whether the father was at home when the respondent was growing up. The lack of these variables, especially Father's Occupation, is a serious deficiency and means that background variables will explain less variance in education and life chances in the PA sample than a full set of background variables would.

SRC did not attempt to include any measure of ability or intelligence in the PA questionnaire. Omission of the "IQ" variable will tend to bias the coefficients of causally subsequent variables in the multivariate equations. This bias is of particular concern when we estimate the effects of education on subsequent occupational and economic status.

The PA survey provides data on several major dependent variables: Education, Occupation, Annual Earnings, and Family Income. The Education variable presented some of the same coding problems as Father's Education, and I adopted the same coding procedure. I coded those with "High School plus Non-Academic Training" as having 12 years of education but created a dummy variable (called Vocational Training) to distinguish them from other high school graduates.

Although the PA tape contains a Duncan scoring for occupational status, it appeared to be defective, so I assigned Occupation codes on the basis of nine broad occupational categories. (See footnote to Table 1 for a description of the problems I encountered in coding Occupation.)

The income and earnings information on the PA data tape includes eleven items for each family unit. SRC coded most of these items in dollars, but truncated earnings at $99999. All PA income information is for the calendar year 1964. To construct a measure of Annual Earnings comparable to the Census definition, I added wage and salary income, farm income and income from unincorporated businesses.

SRC allocated values to all missing income items. The tape does not indicate which items were reported and which were allocated, only that some component was allocated, or that none was. Although many respondents with allocations undoubtedly reported earnings, I treated all these men as if they had no earnings data. For the Family Income variable, on the other hand, I treated SRC's allocated estimate as a valid response, since I was less interested in this outcome and did not want to further reduce the sample.

Unlike most other datasets, the PA survey has information on College Quality. SRC asked college graduates (but not dropouts) what college they attended. It then classified the colleges into five categories based on the "selectivity" of the college's student body.[2]

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[2] SRC reports that the selectivity measure was derived from James Cass and Max Birnbaum, Comparative Guide to American Colleges,

The PA codebook lists about 60 "Very Highly Selective" colleges, about 120 "Highly Selective" colleges and about 160 "Selective" colleges.[3]

Other accredited colleges fall into a fourth category, and unaccredited colleges comprise the fifth and lowest category. SRC coded foreign universities in the Highly Selective category. Although the name of the college was recorded on the questionnaire, the SRC data tape contains only this selectivity code, so no recoding was possible.

3. UNIVARIATE DISTRIBUTIONS

RACE: The PA sample has a slightly larger proportion of Negro respondents and a slightly smaller proportion of other races than the OCG

2/ continued
New York: Harper and Row, 1964. A more recent edition of this book describes their selectivity index as follows: "The selectivity index categorizes the several hundred colleges for which objective data are available...These categories are general but they are based on statistical and other factual information: the percentage of applicants accepted by the college, the average test scores of recent freshmen classes, the ranking of recent freshmen in their high school classes, and other related data that measure the scholastic potential of the student body." See James Cass and Max Birnbaum, Comparative Guide to American College, Fifth Edition New York: Harper and Row, 1972, p. xix.

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[3] Some randomly chosen examples from the list: Very Highly Selective Colleges -- Dickenson, Harvey Mudd, Lehigh, Renssalaer Polytechnic Institute, and Stanford; Highly Selective Colleges -- Lafayette, Lawrence, College of New Rochelle, Seton Hall, University of Southern California; Selective Colleges -- Drake, Nebraska Wesleyan, Norwich, San Fernando Valley State, Virginia Military Institute.

and 1970 Census samples. These differences are not statistically significant.

FATHER'S EDUCATION: The coding of the PA and OCG Father's Education variables differs in three ways:

1) The PA coding has less detail and different cutting points for fathers who finished eight grades or less.

2) Most of the PA missing data is allocated by use of a question on father's literacy.

If a PA respondent did not know how many grades his father had completed, but said his father could read and write, SRC coded Father's Education in the 6-8 category. If the father could not read and write, SRC placed him in the 0-5 grades category. Only about one percent of the sample failed to answer both the father's education and the literacy question. If the nonresponse rate for the PA question on father's schooling was similar to that encountered in other surveys, it is likely that SRC has made father's education assignments for at least 10 percent of the sample. (There is no way of telling for sure, since SRC did not code the literacy question separately.) An inspection of the percentage distribution of responses suggests that the bulk of the cases assigned by SRC ended up in the "6-8 Grades" category. Since the coded mean for this category (7.5) is only a little lower than the overall mean for the variable, it appears that the assignment procedure has had a relatively minor effect on the variable mean. The assignment procedure has evidently had a more drastic effect on the standard deviation of father's education, however. The PA standard deviation for the variable is about 20 percent smaller than the corresponding OCG statistic, mainly because of this concentration of PA responses in the six-to-eight-year category.

3) SRC grouped fathers who attended graduate school but did not earn an advanced degree with fathers who got only a BA. Such men thus get a score of 18 years of education in the OCG coding but only 16 years by the PA coding scheme. Fortunately, very few fathers fall into this category, so the problem has negligible effects on the PA statistics.

Although the net effect of the PA coding techniques should be to lower the mean of Father's Education, we find that the PA Father's Education mean is actually greater than the OCG mean by 0.25 years. (For means and standard deviations of variables, see the columns in Table 2 labelled "Basic Sample".)

I can suggest two possible explanations for this discrepancy between the means of PA and OCG Father's Education. The first is the secular trend in educational attainment. Jackson (Appendix B, Table 2C) shows that the mean educational attainment of fathers was 1.49 years higher for 25-34 year old respondents than for 55-64 year old respondents. Since this is the result of a thirty year interval, a one year difference in birth dates should produce about 0.050 years difference in mean Father's Education. Three years separate the OCG and PA surveys, but the PA sample is 0.8 years older than the OCG sample, so the difference in mean birth dates is 2.2 years. Thus, secular trends account for (2.2)(0.050) = 0.11 years difference, or about half the observed difference in the Father's Education means.

A second source of the discrepancy in PA and OCG Father's Education means may be the effects of different sampling restrictions. The PA sample excludes men who are not heads of households and men who have no earnings. The OCG sample, on the other hand, includes household nonheads and men whose only sources of income are transfer payments or assets.)

SIBLINGS: PA respondents report an average of 4.0 siblings, while OCG respondents average 4.5. This difference is statistically significant. About 25 percent of the discrepancy is due to the fact that PA grouped together all respondents with more than 7 siblings, and I assigned this category a value of 9, whereas the mean for OCG responses greater than 7 is 9.85. Another 15 to 20 percent of the OCG-PA difference is due to the secular decline in family size. The OCG data show that mean Siblings declined by about 0.04 a year.

The unexplained discrepancy is about 0.2 siblings. This is too large to blame on chance. It may be due to the SRC sampling frame. The other SRC sample we analyzed was the PSID and the PSID Siblings is also lower than the OCG mean. The PSID-OCG difference also borders on statistical significance, even after adjustments for coding differences and the secular trend.

NONFARM UPBRINGING: Only 61 percent of the PA respondents report Nonfarm Upbringing, but 79 percent of OCG respondents do. This substantial difference must relate principally to the difference in questions used for creation of the variables. Jackson discusses the difficulties with OCG questions in Appendix B.

NONSOUTH UPBRINGING: The difference between the PA 67 percent with Nonsouth Upbringing and the OCG 70 percent is just barely significant. The PA-Census difference is in the same direction but not significant. No explanation in terms of coding or secular trends is readily available. The explanation must have something to do with differences in sample frame or coverage. (The PA proportion with Nonsouth Background is not significantly different from the proportion in the PSID sample, drawn by the same SRC techniques.)

EDUCATION: The PA mean for respondent's Education is significantly higher than the OCG mean and lower than the 1970 Census mean. Taking the linear regression coefficients of Education on Age (OCG Table 7B) as an estimate of the secular trend, we expect mean education to rise by about 0.084 years every year. The difference in OCG and PA mean birth dates is 2.2 years. We would therefore expect the PA sample Education mean to exceed the OCG mean by (2.2)(0.084) = 0.18 years. In fact, the PA mean is 0.40 years above the OCG. Thus, thus even allowing for the secular trend, the PA Education mean is a little too high in relation to the OCG mean, and the difference borders on significance.

The PA and Census surveys are five years apart, but the difference in mean birth date is 6.2 years. The PA sample should therefore have about (6.2)(0.084) = 0.52 years less education than the 1970 Census sample. In actuality, the PA sample has 0.33 years less education than the Census sample. This discrepancy is almost statistically significant. Another way to compare the PA and Census Education distributions is to match birth cohorts by comparing from Table 7A the PA mean for men 25-29 in 1965 to Census men 30-34 in 1970, and so on. For five of seven comparisons the PA age category mean is a little higher. I conclude that the PA sample reports 0.1 to 0.2 years more education than would a Census or CPS sample in the same year.

This discrepancy is exacerbated if we correct for coding differences between the PA and the other two surveys. Respondents with graduate education but without an advanced or professional degree were coded with the B.A.'s in the PA survey at 16 years of education. All respondents with graduate education were lumped together and coded at 18 in the OCG. Census coding is more precise, but similar in concept to the OCG. The PA coding should lower the mean by about 0.04 years. Thus, the PA sample is more over-educated than my previous comparison implied. This coding difference, combined with the less detailed categories for educational levels below eight years, probably explains the fact that the PA standard deviation of Education is lower than those from the other surveys.4/

4/ Even though the PA nonresponse rate for Education is extremely low, there is no evidence from the PA codebook or questionnaire that nonrespondents were assigned Education codes on the basis of literacy or some other factor, as happened for the Father's Education variable.

AGE: The mean Age of the PA sample exceeds the mean age of both the OCG and the Census by statistically significant amounts. Coding was presumably identical across the surveys.

Trends in the birth rate may contribute to the observed differences, but matching cohorts with the same birth years (PA 25-29, Census 30-34, etc.) suggests that the PA sample contains fewer young men than would be expected, even allowing for birthrate trends. The elimination of men who are not heads of households is at least partly responsible for this difference in age patterns. Nonheads of households have a lower mean and higher standard deviation for Age, indicating that they tend to be drawn from the extremes of the Age distribution. Comparisons of head and nonhead samples in the PSID and Census show that the head of household restriction does not exclude enough men to explain the entire discrepancy in Age distributions. After adjusting for the head of household restriction, the difference between PA and OCG is not significant.

EXPERIENCE: PA respondents are, on the average, older than OCG respondents, but also better educated. The two differences cancel each other out, leaving Experience means that are not significantly different. Since PA respondents are older than the Census sample and have a lower education mean, the PA sample has a significantly larger Experience mean than the Census sample.

OCCUPATION: Duncan scores were assigned using detailed Census occupational categories in the OCG and Census. In the PA, only the major Census occupational categories were used. The mean Occupation scores for the PA and OCG are, nevertheless, almost identical. But because the data are grouped in the PA survey, the standard deviation of Occupation is reduced by about 20 percent. The PA occupation mean is significantly lower than Census occupation mean, a difference that may be due to secular trends.

Comparing the frequency distribution for major occupational categories in the PA survey with the distributions for the other SRC survey (PSID) one finds similar percentages of clerical workers, craftsmen and operatives. The greatest disparity is in the percentage of salaried managers, which is much greater in the PSID than in the PA. The PSID also have a greater number of professionals, but smaller percentages of self-employed managers, farmers and laborers. These distributional differences are consistent with the secular trend in the composition of the workforce. The changes are sufficient to raise the mean of Occupation for the PSID data by almost three Duncan points, a statistically significant amount.

ANNUAL EARNINGS: The CPS series provides a convenient yardstick for comparing incomes from surveys in different years.[5]

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[5] U.S. Bureau of the Census, Current Population Reports, Series P-60, No. 92, "Annual Mean Income, Lifetime Income and Educational Attainment of Men in the United States for Selected Years, 1956 to 1972," U.S. Government Printing Office, Washington, D.C., 1972, Table 2, p. 18.

The OCG income data derive from the 1962 Current Population Survey. The OCG mean is, however, about 2 percent below the mean reported by CPS for this same survey ($5827 vs. $5936). The PA mean for 1964 Annual Earnings is about 15 percent higher than the CPS mean for 1964 income ($7615 vs. $6614). The mean 1969 earnings of the 1970 Census sample ($9585) is about 4 percent above the CPS mean for 1969 income ($9204). The PA earnings mean thus diverges strikingly from the CPS, OCG and Census means.

Coding and definitional differences mask an even larger real discrepancy between the OCG income mean and the PA and Census mean. OCG Income is defined differently than PA and Census Annual Earnings. OCG Income includes earned income, transfer payments, dividends and interest. The PA and Census variables, on the other hand, include only earnings, defined as wage and salary income, farm income, and self-employment income from unincorporated businesses. Men whose self-employment resulted in a net loss of income have been treated as zero-earners and excluded from the PA and Census samples, but not from the OCG, where they are grouped with other men whose incomes were less than $500. Thus, the OCG sample includes some unemployed men, retirees, non-working rich men, and self-employed men with erratic income who were excluded from the PA and Census samples. An income mean for a sample with non-zero income tends to be about 2 percent higher than the Earnings mean for the corresponding sample with Earnings greater than zero. (See McClelland, Chapter 16.)

OCG Income coding also biases the mean. Responses are coded into fairly broad categories, with respondents getting the estimated category mean (usually the category midpoint). Because many of the uncategorized income responses are rounded off to the multiples of $1000 that serve as lower limits for these categories, the distribution of responses within categories is highly skewed. As a result, category midpoints seriously overestimate the true category means. An income mean calculated from grouped responses is usually about $200 higher than the mean of the original distribution. (See McClelland, Chapter 16.) It follows that the upward bias due to coding of OCG income is on the order of 3 or 4 percent. The 1961 and 1964 CPS mean were also calculated from grouped responses and so are subject to a similar bias.

With adjustments for coding and definitional biases, the OCG mean is about 4 percent below the CPS baseline, the PA mean about 19 percent above it, and the Census mean about 4 percent above it. A gap of about 5 percent between PA and one of the other surveys would be statistically significant. Some sample restrictions explain part of the gap between the PA and the other two surveys. Restricting the Census and OCG samples to heads of households would raise income means by something like 4 or 5 percent. (See Appendix D.) Removing students and cases with income allocations from the OCG sample would raise that mean by another 1 or 2 percent. (See Chapter 16.)

The PA sample is also overeducated with respect to the OCG and Census (See above), and the approximately 0.2 years of extra education account for another 0.2 x $690 = $138, or about 2 percent of the PA Earnings mean (See Table 9B). The lack of any weighting for nonresponse to the PA may contribute to this systematic sampling difference. Another explanation of the aberrant PA results relates to the way the survey organizations gather and process income data. The PSID, our other SRC sample, exhibits the same pattern of relatively high income means, and the pattern persists even for very careful comparisons of matched samples. (See Jackson, Chapter 15 and McClelland, Chapter 16.) SRC may locate more income, because it asks more detailed income questions than the CPS or Census. As a non-governmental organization, SRC may also find its respondents more willing to report their incomes fully.

PA income has a larger standard deviation relative to its mean than OCG or Census ($V_{PA} = 0.83$; $V_{Census} = 0.78$; $V_{OCG} = 0.74$). Coding is the likely explanation. When I coded all PA respondents over $35,000 to $50,000 (a 1965 approximation of the Census coding scheme), V_{PA} dropped to 0.77. When I grouped PA Annual Earnings in CPS categories, V_{PA} was 0.72. The small size of the PA Ln Earnings standard deviation indicates that the PA has relatively fewer low-income respondents than the other two surveys. Grouping appears to have a negligible effect on standard deviation of Ln Earnings.

4. ITEM NONRESPONSE

My analyses make use of two different samples.

The basic sample includes all cases that meet our standard set of sample restrictions. The "complete-data" subsample which eliminates cases with certain kinds of missing data. The three surveys under discussion have different kinds of missing data. In the OCG survey, nonresponse on a background item was the usual reason for deletion of a case. Since the PA data omit Father's Occupation, and the Father's Education allocations lack proper flags, background variables were not a major source of deletions for missing data; about 3 percent of the basis sample had identifiable missing data on background variables.

I deleted 11.5 percent of the basic PA sample because of income allocations. Census, like PA, has a limited set of background variables. Earnings allocations were the most frequent reasons for dropping cases from the complete-data subsample.

Table 2A shows means and standard deviations for the basic sample, the complete-data subsample and the cases deleted from the complete-data subsample. In spite of different reasons for eliminating cases, the effects of selecting a complete-data subsample are about the same in the three surveys. All three complete-data subsamples are generally a little better off than the corresponding basic samples. The apparent between-sample differences tend to be a little less serious for the complete-data subsamples than for the basic samples we have been comparing (especially differences in education and income).

Table 2B compares correlations from the complete-data sample to the basic sample correlations.

Almost two-thirds of the correlations for the PA complete-data subsample are smaller in absolute value than basic-sample correlations.

The difference between PA complete-data and basic-sample correlations seldom exceed 0.025 for major variables.

5. BIVARIATE RELATIONSHIPS

FATHER'S EDUCATION: Table 3A and 3B present the relationships of six dependent variables to Father's Education. Table 3A covers the basic sample. Table 3B contains bivariate regression results for the complete-data sample. PA coding of Father's Education diverges from the OCG for nonrespondents, men with graduate education but no degree, and men who attended vocational school. For this latter category, I used a dummy variable in the bivariate regression analysis of Table 3B. While the coefficients of Father Vocational School are large, they are not statistically significant.

I omitted this dummy from subsequent analysis.

Comparing PA to OCG results for Father's Education, we find few important differences, especially if we take into account the differences in univariate distributions and coding of variables. The bivariate regressions of Education and Occupation on Father's Education are not significantly different in PA and OCG. For earnings/income the differences are statistically significant, probably because of coding problems. The assignment of PA missing data to the 6-8 category of Father's Education both increases the number in that category and depresses its mean on the dependent variables relative to the means for adjacent Father's Education categories. Because the 6-8 category contains over sixty percent of the PA responses, it tends to dominate the PA regression results; its low mean relative to the categories above it artificially inflates the slope of the PA regression line.

SIBLINGS: The PA results for Siblings (Tables 5A and 5B) also parallel the OCG results. The linear regression coefficient of PA Occupation on Siblings is lower than the OCG coefficient,

but this comparison is of little substantive interest given the gross differences in the coding of Occupation. For Ln Earnings the difference in regression coefficients is not statistically significant. I will omit any comparison of dollar coefficients, since these are sensitive to the multiplicative effects of inflation and changes in real income.

Quadratic nonlinearities appear to be less important in the PA Siblings results than in the OCG, because of the difference in coding. OCG codes siblings up to 18, while the PA codes everyone with 8 or more siblings in a single category. The OCG tables indicate that the negative impact of Siblings on life chances disappears beyond nine or ten. Since the PA coding suppresses this long tail of the Siblings distribution, the effects of Siblings appear linear.

RACE: Table 6 presents means and standard deviations for respondents classified as White, Black and other. In general, the data from the three surveys are consistent with the notion that Blacks made education and income gains relative to Whites between 1961-62 and 1969-70.

The absolute Black-White gap in years of schooling narrows from 3.0 in OCG to 2.8 in PA to 2.3 in the 1970 Census. For Ln Earnings the Black mean goes from 45.3 percent of the White mean in OCG to 50.6 percent in PA to 59.3 in the 1970 Census. Large coding differences make the comparison of PA Occupation with OCG and Census difficult.

AGE: The PA results for Age (Tables 7A and 7B) are also quite similar to OCG and Census findings. The regression of Education on Age is not significantly different in the three surveys. PA, like OCG and Census shows virtually no relationship between Occupation and Age. For Ln Earnings the PA tables display the same weak curvilinear relationship we see in the other sets of results. The difference in coefficients is not statistically significant.

Age is the first variable discussed so far that has noticeably different effects on Earnings and Family Income. The relationship of Family Income to Age is curvilinear, but the peak occurs later in the career cycle (almost age 50), and the reduction with increasing age is less drastic. Part of the Family Income advantage for older men is that wives return to work after the children are old enough to go to school. In addition some older men accumulate income-producing assets, while others get transfer payments, such as Social Security.

EDUCATION: Because of Occupation coding differences, the regression of Occupation on Education is significantly flatter in the PA than in OCG or Census, though the PA regression equation explains almost as much variance. Years of Education also explains slightly less of the variance in Annual Earnings in PA than in OCG. But it explains 24 percent of the variance in Ln Earnings for the PA sample, compared to 16 percent for OCG, and 15 percent in the Census. Results for Earnings$^{1/3}$ are similar to those for Ln Earnings, except that all figures are slightly higher. The coefficient of Years of Education in the PA Ln Earnings equation is greater than the corresponding OCG or Census coefficients. The difference is statistically significant in the case of the Census but not in the case of OCG. The nonlinear effects of Education on Ln Earnings show up much more prominently in the Census and OCG results, because of the differences in Education coding. PA Annual Earnings and Earnings$^{1/3}$ coefficients do not seem to match the findings of the other two samples any better than Ln Earnings coefficients do.

There are many possible explanations for the large increase in R^2 that occurs in the PA, when we take the log of earnings. First,

because PA coded only men with graduate degrees as having graduate education, these men's Earnings are higher than in other samples. This makes the apparent effect of education on Ln Earnings more nearly linear, and reduces the heteroscedasticity in the top educational category. Men with graduate education but no degree are more like men with BA's than like men with graduate degrees.

Second, and more important, the log transformation compresses unexplained variance at the top of the income distribution but exaggerates variance in low incomes. Variance at the extremes is more unpredictable. Since the PA sample contains fewer men with very low incomes than the other two samples, using Ln Earnings instead of dollar Earnings raises R^2 much more.

One other factor that influences R^2 differences is the reliability of the income measurements. Census earnings reports from the self-administered questionnaire are likely to be less reliable than PA or OCG interview measurements. (See Chapter 16.) This would contribute to the lower observed R^2 values of the Census.

WORK EXPERIENCE: Table 10 displays regression results for Experience, controlling for the effects of Education. PA findings on the effects of experience do not appear to differ in any important way from the OCG or Census results. Differences between the Experience coefficients in the PA and OCG Occupation equations do not reach statistical significance.

6. MULTIVARIATE RELATIONSHIPS

DETERMINANTS OF EDUCATIONAL ATTAINMENT: Comparisons between PA and OCG and Census results for the multivariate regression equations are even more difficult to make than univariate and bivariate comparisons since the variables entered into the equations do not correspond.

Table 13A contains a multivariate analysis of the determinants of Years of Education. The first equation enters the basic background variables. Despite the fact that PA did not measure Father's Occupation (except indirectly via the question on Nonfarm Upbringing) the PA equation explains about 29 percent of the variance in Years of Education, compared to 32 percent for OCG.

The standard deviation of residuals is also a trifle smaller for the PA equation. None of the differences in coefficients merits special comment.

Equation 2 in Table 13A introduces quadratic terms. I orthogonalized all quadratic and interaction terms in the multivariate tables. Table 19 describes their construction. I allowed the squared terms to enter only if they were statistically significant at the 0.05 level (two-tailed) in the bivariate analysis.

Equation 3 in Table 13A adds Age. The Age coefficient is about the same magnitude as in OCG and the R^2 value is closer to OCG for this equation than for the first one.

Equation 5 in Table 13A and the series of equations for different age groups in Table 13C test interaction effects. The interactions between Race and Nonfarm Upbringing, Race and Age and Father's Education and Age are significant. The interaction between Race and Age was also significant in OCG.

DETERMINANTS OF OCCUPATIONAL STATUS: The Occupation variable is not one of the strengths of the PA survey. The PA variable has a sharply restricted standard deviation compared to OCG. The PA regression equations in Table 14A explain less variance but also show a smaller standard deviation of residuals than corresponding OCG equations. When I included Education in the regression, R^2 in the PA and Census was similar.

Except for coefficients of Father's Education and Nonfarm Background, which are inflated relative to OCG by the omission of the Father's Occupation variable, PA unstandardized regression coefficients appear to have been biased downward by the Occupation coding problems. The College Quality dummy variables entered in Equation 6 of Table 14A do not have statistically significant coefficients. There is no evidence from this that, other things equal, graduation from a more selective college conveys any advantage in occupational status.

The multiplicative interaction of Higher Education with Experience is significant in both the PA and OCG. The interactions between Nonfarm Upbringing and Experience and between Race and Non South Upbringing are both significant in PA.

DETERMINANTS OF ANNUAL EARNINGS: Tables 15, 16 and 17 display multivariate regression solutions for the determination of annual earnings. Coding differences, sampling differences, and possibly other sources of noncomparability are such that we have no good way of equating unstandardized results in OCG and Census dollars to results in PA dollars. R^2 for the regression of Ln Earnings on PA background variables (Table 16A, Equation 1) is 0.03 more than in OCG (0.19 vs 0.16). The standard deviation of residuals for this equation is also smaller in the PA than the OCG. The startling improvement in R^2 when one takes the log of earnings is one way in which the PA results consistently differ from the OCG or Census results. As noted in Section 3, differences in income distributions among the surveys account for these contrasting patterns of explained variance.

Equation 6 in PA Table 16A contains a set of variables unique to the PA survey — the College Quality indicators. In Equation 6 and those that follow, the College Graduation coefficient refers to the effects of a degree from an average, or nonselective, college. The coefficients for the other College Quality dummy variables, then, represent deviations from the predicted level for this average college graduate group. Equation 6 implies that, controlling for background factors, graduates of colleges in the Very Highly Selective category earn $e^{0.3659} = 1.44$ times more than graduates of nonselective colleges. The earnings advantage is 20 percent for graduates of Highly Selective colleges and 28 percent for Selective Colleges. This unexpected reversal is not significant. These earnings advantages do not disappear when we control for Experience, Occupation, Ln Weeks Worked and various interaction effects (Equations 7, 8 and 9). The earnings advantage for men in the Selective College category goes up, in fact, to over 40 percent after such controls. Table 15A suggests that getting a degree from a Selective or Very Highly Selective college was worth about $5000 in 1965 earnings. All of the College Quality coefficients would be reduced, of course, if we could control for Father's Occupation and Test Score.[6]

Inclusion of Ln Weeks Worked in Equation 9 of Table 16A raises R^2 to 0.461. The coefficient of Ln Weeks Worked (about 1.0) indicates that men who work part of a year are paid at about the same weekly rate as men with similar characteristics who work 52 weeks.

Interactions significant in the PA were either not significant in OCG data or involved variables not available for that survey. The race-education interactions that figure significantly in the OCG Ln Income equations had negligible coefficients in the PA data. A negative interaction between Non-South Upbringing and Years of Education shows up as statistically significant in equations for PA Annual Earnings and Census Earnings$^{1/3}$

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[6] James Morgan and Ismail Sirageldin show similar college quality-income results using a slightly different subsample from the Productive American survey. See "A Note on the Quality Dimension in Education," Journal of Political Economy, V 76 (September, 1968), pp. 1069-1077.

A set of equations for the determination of Earnings$^{1/3}$ appears in Table 17. The most notable finding in connection with this earnings transformation is that in the PA, as in OCG and Census, Earnings$^{1/3}$ yields higher R^2 values than either dollar or log-dollar equations.

DETERMINANTS OF FAMILY INCOME: Table 18 presents a set of multivariate equations, similar to the ones we have been looking at, for the prediction of Family Income. OCG and Census lack a family income variable, so we cannot compare PA results to the other surveys. Since the male head's earnings are the major component of most families' income, the Family Income results are generally quite similar to the results for Annual Earnings in Table 15A. R^2 totals are lower by 0.02 to 0.04 in the family income equations, and the larger standard deviations of residuals reflect the larger variance of the family income distribution. The most striking differences in coefficients are for Experience and for the College Quality variables. The work experience coefficient is influenced by the fact that family income tends to reach a peak later in the career cycle than annual earnings. The higher coefficients for college selectivity may be evidence that men with capital resources tend to come from families that can afford to send their sons to more expensive colleges. Men who graduate from selective colleges may also have a better chance of marrying women with high earnings potential.

CONCLUSIONS:- This comparison of results from the Productive Americans Survey to the Occupational Changes in a Generation Survey and the 1970 Census has uncovered serious differences in the univariate distributions of several important variables, especially Earnings.

The PA sample was apparently less efficient in locating young men and men with very low incomes, little schooling, or large numbers of siblings. Partly as a result of such sampling differences, regression equations for Ln Earnings explain substantially more variance than regressions for dollar earnings in contrast to the results from OCG and Census. Other substantive differences in results appear to be less serious, or more easily explainable in terms of the coding and wording of questions.

Table 1: Coding of Principal Questions Used in the Analysis: PRODUCTIVE AMERICANS SURVEY--Frequency of Responses for Male Heads of Households Aged 25-64 in 1965, Not in School or Military Service, with Positive 1964 Earnings. (N = 1392)

Variable Name	Question	Coding	Frequency (Percent)
Race	(By Observation)		
	White	1	90.12
	Negro	0	8.93
	Other	0	.94
			100.00
	Not Ascertained (N = 15)		
Father Foreign	Now I have some questions about your family and past experiences. Where did your father and mother grow up? (FROM BIRTH TO 18 YEARS OF AGE)		
	Father:		
	North Eastern States	0	14.16
	North Central	0	27.09
	Deep South	0	8.93
	Other South	0	26.36
	West	0	4.36
	Foreign Countries--English Speaking	1	3.70
	Foreign Countries--Non-English Speaking	1	15.40
			100.00
	Not Ascertained (N = 15)		

Table 1: PRODUCTIVE AMERICANS

Variable Name	Question	Coding	Frequency
Father's Education[1]	How many grades of school did your father finish? Could he read and write? Did he go to college? Did he get a college degree?		
	0-5 Grades or Don't Know, Could not Read and Write	3	15.77
	6-8 Grades or Don't Know, Could Read and Write	7.5	60.68
	9-11 Grades	10	5.74
	12 Grades (Completed High School)	12	9.74
	12 Grades plus Non-Academic Training	12	.51
	College, No Degree	14	3.20
	College, Bachelor's Degree	16	3.56
	College, Advanced or Professional Degree	18	.80
			100.00
	Not Ascertained (N = 16)		
Non-South Upbringing[2]	Where did you (HEAD) grow up? (FROM ABOUT AGES 6-16)		
	North Eastern States	1	21.53
	North Central	1	31.75
	Deep South	0	7.42
	Other South	0	25.41
	West	1	9.50
	Foreign Countries—English Speaking	1	1.01
	Foreign Countries—Non-English Speaking	1	3.38
	Not Ascertained (N = 3)		100.00

Variable Name	Question	Coding	Frequency
Non-Farm Background	Was that on a farm, or in a city, or what?		
	Farm	0	38.69
	Small Town, City of Any Size, Suburb or Other	1	61.31
			100.00
	Not Ascertained (N = 4)		
Siblings	How many brothers and sisters did you have?		
	1	1	14.61
	2	2	16.78
	3	3	12.73
	4	4	10.12
	5	5	10.12
	6	6	7.88
	7	7	5.71
	8 or more	9	14.68
	None	0	7.38
			100.00
	Not Ascertained (N = 9)		
Education	How many grades of school did you finish?		
(Vocational training, Years of Higher Education, College Graduation, Graduate Degree)	Have you had any other schooling? What other schooling have you had? Did you get a college degree?		
	0-5 Grades	3	5.90
	6-8 Grades	7.5	19.06
	9-11 Grades	10	19.42
	12 Grades (Completed High School)	12	16.19

Variable Name	Question	Coding	Frequency
Education (continued)	12 Grades plus Non-Academic Training	12	13.67
	College, No Degree	14	11.44
	College, Bachelor's Degree or No Advanced Degree Mentioned	16	10.86
	College, Advanced or Professional Degree	18	3.45
			100.00
	Not Ascertained (N = 2)		

College Quality[3]

What college was it? (HEAD)
This variable was coded as a set of five dichotomous variables:

1. Very Highly Selective College
2. Highly Selective College
3. Selective College
4. College Not Ascertained
5. College Graduation (Nonselective)

	Dichotomous Variable Coding					
	1	2	3	4	5	
Very Highly Selective	1	0	0	0	1	1.87
Highly Selective (Foreign Universities Included)	0	1	0	0	1	3.16
Selective	0	0	1	0	1	2.66
Nonselective, but Accredited	0	0	0	0	1	5.24
Clearly Inferior (Not Accredited)	0	0	0	0	1	.43
Not Ascertained	0	0	0	1	1	.93
No College Degree	0	0	0	0	0	85.70
						100.00

Variable Name	Question	Coding	Frequency
Age	Age of head of family unit (from box listing "all persons 18 years of age or over living in the dwelling unit)	(Continuous coding in years.)	
	25-29 in 1964		10.92
	30-34		11.71
	35-39		13.86
	40-44		14.66
	45-49		15.23
	50-54		13.86
	55-59		10.99
	60-64		8.76
			100.00
	Not Ascertained (N = 0)		
Experience	Constructed variable. Experience in 1964. Experience in 1964 = Age in 1964 - (Education + 6), if Education greater than 7. **Experience** in 1964 = Age in 1964 - 13, otherwise.		
	0-5 years		2.44
	6-10		9.48
	11-15		10.70
	16-20		13.79
	21-25		13.65
	26-30		13.72
	31-35		12.21
	36-40		11.06
	41-45		7.83
	46-50		5.10
			100.00
	Not Ascertained (N = 0)		

Variable Name	Question	Coding	Frequency
Occupation[4]	Now we would like to ask you about your present job. Are you working now, unemployed or laid off, retired, or what? (IF WORKING) What is your main occupation? (IF UNEMPLOYED) What kind of work do you do when you work? (IF RETIRED) What kind of work did you do when you worked?		
	Professional, Technical and Kindred Workers	75	13.07
	Managers, Officials, Proprietors, Not Self-Employed	58	8.84
	Managers, Officials, Proprietors, Self-Employed	48	10.27
	Clerical and Sales Workers	47	10.99
	Craftsmen, Foremen, and Kindred Workers	31	21.91
	Operatives and Kindred Workers	18	15.95
	Laborers and Service Workers	12	9.91
	Farmers and Farm Managers	14	5.53
	Miscellaneous Groups (Including Government Protective Service Workers and Occupation Not Ascertained)	19	3.52
			100.00
Weeks Worked[5]	How many weeks of vacation did you take last year? How many weeks were there last year when you weren't working because of illness or unemployment? Then, how many weeks did you actually work last year? (Estimated from data on hours worked, where direct responses were not available.)		

Variable Name	Question	Coding	Frequency
Weeks Worked (continued)	13 weeks or less	6	1.51
	14-26 weeks	20	1.65
	27-39	33	5.75
	40-47	44	10.78
	48-49	49	6.25
	50-51	51	2.30
	52	52	71.77
			100.00
	Not Ascertained (N = 0)		
Annual Earnings	How much did you (HEAD) receive for wages and salary in 1964, that is, before deductions for taxes or anything? In addition to this did you have any income from bonuses, overtime or commissions? Did (HEAD) receive any other income in 1964 from: (a) professional practice or trade? (b) farming, market gardening, roomers or boarders? (IF FAMILY OWNED AN UNINCORPORATED BUSINESS) In 1964 how much was your family's share of the total income from the business, that is, what you took out plus any profits you left in? (IF FARMER) (a) What were your total receipts from farming in 1964, including soil bank payments and commodity credit loans? (b) What were your total operating expenses not counting living expenses? (c) That left you a net income from farming of (A-B) = ?		
	$1-99	(Coded in dollar amounts)	2.11
	1000-1999		4.06
	2000-2999		4.87

Table 1: PRODUCTIVE AMERICANS

Variable Name	Question	Coding	Frequency
Annual Earnings (Continued)	3000-3999		7.31
	4000-4999		7.96
	5000-5999		13.08
	6000-6999		13.00
	7000-7999		13.08
	8000-8999		9.02
	9000-9999		6.26
	10000-14999		13.08
	15000-19999		3.09
	20000-24999		.97
	25000-99999		2.11
			100.00
	Not Ascertained (N = 161)		
Family Income[6]	Constructed from Head's Earnings (as defined above) plus Spouse's Earnings plus Rent, Interest, Dividends, Trusts plus Transfer Payments		
	$1-999	(Coded in dollar amounts)	.58
	1000-1999		2.95
	2000-2999		3.38
	3000-3999		4.89
	4000-4999		6.47
	5000-5999		9.13
	6000-6999		9.71
	7000-7999		11.36
	8000-8999		11.21

Variable Name	Question	Coding	Frequency
Family Income (Continued)	9000-9999		7.76
	10000-14999		21.64
	15000-19999		6.40
	20000-24999		1.65
	25000-161888		2.88
			100.00
	Not Ascertained (N = 1)		

FOOTNOTES

1. Father's Education: There are two important ways in which SRC codes for Father's Education differ from OCG. The first is that SRC assigns a large proportion of the missing data for the schooling question to one of the two lowest education categories on the basis of the respondent's answer to a question about whether or not his father was literate. Second, SRC puts persons who attended graduate school in a separate category from other college graduates only if they received a graduate degree.

To assign years of schooling to the SRC categories, I took midpoints of the intervals except for the two bottom and two top categories. Data from the Census indicated that 3 and 7.5 approximated the means for the 0-5 grade and 6-8 grade categories. The choice of 16 and 18 as a year-of-schooling equivalents for the top two SRC categories was, in retrospect, a mistake. (I made the decision to try to duplicate the OCG codes before I was fully aware of the way in which the SRC coding system was unique.) The appropriate means for the top SRC categories are larger than 16 and 18. I am not aware of any data, however, that would allow us to determine the number of years of schooling completed by the average holder of a graduate or professional degree.

2. Non-South Upbringing: Includes all states except the following: Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia, Washington, D. C.

3. College Quality: There were so few responses in the "Clearly Inferior (Not Accredited)" category that I combined it with the "Nonselective" category in the regression analysis.

4. Occupation: Occupational information for head of household is coded twice on the PA data tape. One coding involves 40 broad Census-type categories which can be collapsed into nine major Census occupational groups. A second occupational coding effort, apparently independent of the first, makes use of 500 detailed occupational categories with the appropriate Duncan Scores attached. This second coding scheme can also be collapsed into major Census occupational groups, but cross-tabulation of one occupation variable against the other by major groups reveals a distressing lack of correspondence between them. About 8.5 percent of the total sample differ in major occupational group, with some of the differences requiring a considerable act of imagination to justify (e.g. Professional vs. Farm Laborer). A spot-check of the variable print-outs for cases with especially puzzling differences convinced me that the first of the two codings is more likely to be interpretably consistent with the rest of the information available about the respondent. Moreover, use of the second coding scheme would have involved deletion of an additional 5 percent of the cases from multivariate analysis. My choice of the first of the two occupational codings was also based on the desire to maintain comparability with the other SRC dataset, the PSID. In any case, the utility of the PA data for our purposes rests not on occupational codings but on the detailed income information provided.

Table 1: PRODUCTIVE AMERICANS, Footnotes continued

5. Weeks Worked: My Weeks Worked variable differs from the variable appearing on the SRC data tape in two ways. First, for full-time workers, I added back in the vacation weeks that SRC had subtracted out of the weeks-worked total. Second, for responses coded 0 or missing, I substituted a weeks-worked estimate based on total hours worked in 1964 divided by 40 and rounded off to the appropriate category code. Men with zero weeks worked but a positive Annual Earnings total were included in the lowest Weeks Worked category if information on hours worked was unavailable. I made no attempt to flag cases with an estimated Weeks Worked total or to exclude them from any analysis.

6. Family Income: The case labelled "Not Ascertained" for this variable is one to which SRC had allocated a Family Income total of $999,999. I assumed that this was a wild score.

Table 2: Means and Standard Deviations of 17 Basic Variables for Male Heads of Households Aged 25-64 in 1965. Nonstudent, Nonmilitary, with Positive Earnings in 1964: Comparison of PRODUCTIVE AMERICANS Respondents With and Without Missing Data.

Variable	Number	Means			Standard Deviations		
		Basic Sample	Rs With Complete Data	Rs With Partial Data	Basic Sample	Rs With Complete Data	Rs With Partial Data
1. Respondent White	1377	.901	.907	.862	.298	.290	.345
2. Father's Education	1376	7.978	7.978	8.064	3.193	3.165	3.375
3. Father Foreign	1392	.189	.195	.152	.392	.397	.360
4. Siblings	1383	3.968	3.939	4.144	2.810	2.793	2.911
5. Nonfarm Upbringing	1388	.613	.614	.610	.487	.487	.489
6. Nonsouth Upbringing	1389	.672	.678	.637	.470	.468	.482
7. Education	1390	11.093	11.149	10.767	3.470	3.469	3.468
8. Vocational Training	1392	.136	.142	.103	.343	.349	.305
9. Age	1392	43.959	43.547	46.358	10.718	10.855	9.539
10. Experience	1392	25.636	25.166	28.373	11.822	11.996	10.368
11. Weeks Worked	1392	48.613	48.572	48.848	8.101	8.192	7.569
12. Ln Weeks Worked	1382	3.865	3.864	3.873	.265	.268	.248
13. Occupation	1392	37.324	37.879	34.093	20.480	20.610	19.447
14. Annual Earnings	1231	7614.73	7632.41	7126.14	6342.62	6122.28	10888.38
15. Earnings$^{1/3}$	1231	18.199	18.243	16.988	4.012	3.960	5.168
16. Ln Earnings	1231	8.714	8.723	8.463	.714	.707	.854
17. Family Income	1391	9449.11	9494.87	9181.31	8412.50	8258.66	9281.24

Table 2A: Correlations Among 16 Basic Variables for Males Aged 25-64 in 1965, Non-Student, Non-Military, with Positive 1964 Earnings: Comparison of PRODUCTIVE AMERICANS Complete Data Sample (C) to Basic Sample (B). (Complete Data Sample N = 1188)

			1	2	3	4	5	6	7	8
1.	Respondent White	C	1.000							
		B	1.000							
2.	Father's Education	C	.118	1.000						
		B	.112	1.000						
3.	Father Foreign	C	.099	-.038	1.000					
		B	.098	-.045	1.000					
4.	Siblings	C	-.159	-.215	-.039	1.000				
		B	-.147	-.214	-.040	1.000				
5.	Non-Farm Upbringing	C	.086	.223	.225	-.272	1.000			
		B	.087	.225	.218	-.280	1.000			
6.	Non-South Upbringing	C	.302	.138	.317	-.168	.326	1.000		
		B	.313	.140	.307	-.161	.311	1.000		
7.	Education	C	.211	.414	.040	-.334	.324	.255	1.000	
		B	.221	.409	.041	-.355	.337	.266	1.000	
8.	Vocational Training	C	.080	-.029	-.049	-.058	.041	.070	.100	1.000
		B	.075	-.012	-.037	-.069	.048	.078	.104	1.000
9.	Age	C	.042	-.102	.054	.109	-.106	.010	-.266	-.120
		B	.040	-.097	.049	.103	-.106	.008	-.249	-.133
10.	Experience	C	-.007	-.199	.040	.184	-.175	-.046	-.484	-.130
		B	-.010	-.196	.035	.185	-.180	-.053	-.473	-.143
11.	LN Weeks Worked	C	.097	.098	.036	-.062	.079	.049	.207	.063
		B	.105	.088	.028	-.074	.079	.068	.194	.052
12.	Occupation	C	.213	.306	.061	-.222	.267	.145	.591	.039
		B	.222	.312	.061	-.247	.290	.156	.597	.042
13.	Annual Earnings	C	.170	.234	.071	-.179	.212	.132	.391	.012
		B	.175	.230	.065	-.188	.212	.133	.390	.011
14.	Earnings$^{1/3}$	C	.246	.276	.128	-.219	.303	.222	.496	.053
		B	.253	.269	.125	-.231	.308	.223	.503	.055
15.	LN Earnings	C	.257	.260	.142	-.207	.306	.232	.488	.067
		B	.264	.250	.141	-.220	.313	.233	.497	.068
16.	Family Income	C	.150	.217	.053	-.147	.177	.115	.338	-.013
		B	.160	.218	.062	-.156	.186	.134	.341	-.014

Table 2A: Correlations Among 16 Basic Variables for Males Aged 25-64 in 1965, Non-Student, Non-Military, with Positive 1964 Earnings: Comparison of PRODUCTIVE AMERICANS Complete Data Sample (C) to Basic Sample (B). (Complete Data Sample N = 1188)

		9	10	11	12	13	14	15	16
1. Respondent White	C								
	B								
2. Father's Education	C								
	B								
3. Father Foreign	C								
	B								
4. Siblings	C								
	B								
5. Non-Farm Upbringing	C								
	B								
6. Non-South Upbringing	C								
	B								
7. Education	C								
	B								
8. Vocational Training	C								
	B								
9. Age	C	1.000							
	B	1.000							
10. Experience	C	.970	1.000						
	B	.969	1.000						
11. LN Weeks Worked	C	-.119	-.146	1.000					
	B	-.107	-.140	1.000					
12. Occupation	C	-.073	-.222	.074	1.000				
	B	-.079	-.230	.090	1.000				
13. Annual Earnings	C	.054	-.051	.186	.336	1.000			
	B	.057	-.048	.182	.332	1.000			
14. Earnings$^{1/3}$	C	-.014	-.136	.360	.418	.888	1.000		
	B	-.018	-.141	.356	.420	.883	1.000		
15. LN Earnings	C	-.056	-.170	.463	.403	.759	.967	1.000	
	B	-.062	-.177	.457	.405	.752	.966	1.000	
16. Family Income	C	.105	.009	.119	.296	.911	.763	.657	1.000
	B	.108	.005	.124	.306	.919	.764	.633	1.000

Table 3A: Respondent Characteristics by Level of Father's Education: Male Heads of Households Aged 25-64 in 1965, Nonstudent, Nonmilitary with Positive Earnings in 1964: PRODUCTIVE AMERICANS

Level of Father's Education	N	Education		Occupation		Annual Earnings		Earnings$^{1/3}$		Ln Earnings		Family Income	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Total	1392	11.093	3.469	37.324	20.473	7614.73	6340.12	18.199	4.011	8.714	.714	9449.10	8410.04
0-5 Years	217	9.382	3.521	30.442	17.592	5810.98	3676.44	16.686	3.673	8.449	.718	7360.70	4627.70
6-8 Years	835	10.623	3.235	34.816	19.615	7125.31	5585.63	17.913	3.700	8.672	.693	8807.64	7403.43
9-11 Years	79	12.728	2.413	44.570	19.827	9053.41	7503.97	19.332	3.997	8.915	.600	10768.51	7610.98
High School	134	13.291	2.624	47.731	19.848	9847.46	6659.14	19.924	4.189	8.991	.710	11971.53	10089.86
Voc. School	7	14.000	2.138	53.714	16.934	23740.00	25313.01	25.226	7.890	9.656	.836	27993.27	32377.79
Some College	44	13.784	2.666	51.091	21.734	10408.00	5987.58	20.572	3.434	9.124	.480	12345.11	8246.53
BA	49	14.673	2.721	55.898	17.606	11103.30	11556.02	20.245	5.115	9.026	.735	15329.65	15576.95
Grad Degree	11	16.000	1.705	51.182	21.850	11159.44	7005.02	20.781	4.267	9.132	.607	13137.72	6331.88
NA	16	9.167	3.453	27.187	13.450	5268.53	2708.91	16.320	3.179	8.399	.633	6947.12	3011.05
		eta^2 = .180		eta^2 = .112		eta^2 = .078		eta^2 = .086		eta^2 = .072		eta^2 = .071	
		N = 1390		N = 1392		N = 1231		N = 1231		N = 1231		N = 1391	

Table 3B: Regressions of Respondent Characteristics on Father's Education for Male Heads of Households Aged 25-64 in 1965, Nonstudent, Nonmilitary, with Positive 1964 Earnings: PRODUCTIVE AMERICANS complete data sample. (N=1188)

Notes: Standard Errors are in parentheses below coefficients. Coefficients in brackets are smaller than twice their standard error.

Dependent Variable	Father's Education	Father's Education^2	Vocational Training	Constant	R^2	S.D. Residuals
Education	.454 (.029)			7.526	.172	3.158
	[.209] (.109)	.0136 (.006)		8.470	.176	3.152
	[.208] (.109)	.0137 (.006)	[.552] (1.584)	8.475	.176	3.153
Occupation	1.992 (.180)			21.990	.094	19.630
	[.706] (.678)	.072 (.037)		26.955	.097	19.606
	[.694] (.678)	.072 (.037)	[7.294] (9.849)	27.021	.097	19.610
Annual Earnings	452.73 (54.60)			4020.69	.055	5954.71
	[295.48] (205.90)	[8.78] (11.09)		4628.15	.055	5955.64
	[292.39] (206.03)	[8.83] (11.09)	[1751.42] (2991.91)	4643.93	.056	5957.29
Earnings$^{1/3}$	.346 (.035)			15.485	.076	3.808
	.348 (.132)	[-.0001] (.007)		15.478	.076	3.809
	.344 (.132)	[-.0001] (.007)	[1.805] (1.913)	15.494	.077	3.809
Ln Annual Earnings	.0580 (.005)			8.260	.067	.683
	.0663 (.024)	[-.0005] (.001)		8.228	.068	.684
	.0657 (.024)	[-.0005] (.001)	[.3129] (.343)	8.231	.068	.684
Total Family Income	566.16 (73.96)			4978.23	.047	8065.27
	[193.65] (278.73)	[20.81] (15.01)		6417.22	.049	8062.14
	[187.41] (278.85)	[20.89] (15.02)	[3537.06] (4049.42)	6449.09	.049	8062.94

Table 5A: Respondent Characteristics by Number of Siblings: Male Heads of Households Aged 25-64 in 1965, Nonstudent, Nonmilitary, with Positive Earnings in 1964. PRODUCTIVE AMERICANS.

Number of Siblings	Number of Responses	Education		Occupation		Annual Earnings		Earnings$^{1/3}$		Ln Earnings		Family Income	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Total	1392	11.093	3.469	37.324	20.474	7614.73	6340.16	18.199	4.011	8.714	.714	9449.11	8410.07
0	102	12.598	3.169	43.461	21.721	10411.16	11228.13	19.777	5.052	8.957	.715	12072.54	13769.04
1	202	12.792	3.032	43.119	21.610	8512.33	6378.65	18.894	4.186	8.821	.762	10623.11	8648.39
2	232	12.114	3.301	41.815	21.347	8026.50	4539.25	18.804	3.483	8.831	.634	9688.31	5186.93
3	176	11.557	2.943	41.648	19.864	8435.50	5408.10	18.990	3.844	8.850	.695	10679.87	8240.62
4	140	10.832	3.152	34.871	18.966	7837.22	9676.57	18.194	4.157	8.723	.631	9725.08	14088.61
5	140	10.186	3.160	32.564	18.730	7007.13	4802.68	17.835	3.623	8.667	.634	8728.47	5260.87
6	109	9.844	3.219	33.046	18.619	6101.23	3709.19	17.005	3.667	8.501	.772	8627.63	7126.00
7	79	9.190	3.511	30.165	17.116	6775.66	5201.74	17.478	3.966	8.587	.731	7837.40	5386.02
8 or more	203	9.394	3.499	29.956	17.656	5617.70	3224.30	16.576	3.490	8.432	.716	7159.71	4091.67
NA	9	8.375	3.698	30.444	15.152	4907.50	2379.37	16.095	2.610	8.380	.491	5811.56	2935.12
		$eta^2 = .139$		$eta^2 = .069$		$eta^2 = .042$		$eta^2 = .059$		$eta^2 = .054$		$eta^2 = .029$	
		N = 1390		N = 1392		N = 1231		N = 1231		N = 1231		N = 1391	

Notes: I have numbered the tables to correspond to the talbe numbers in other appendices. This means that where PA does not provide data on a variable covered in other surveys, a table will be missing. Father's Occupation, for instance, is the variable treated in Table 4 of other appendices.

Table 5B: Regressions of Respondent Characteristics on Number of Siblings for Male Heads of Households Aged 25-64 in 1965, Nonstudent, Nonmilitary, with Positive 1964 Earnings: PRODUCTIVE AMERICANS complete data sample. (N=1188)

Dependent Variable	Unstandardized Coefficients (and Std. Errors) of Independent Variables				
	Siblings	Siblings^2	Constant	R^2	SD of Residuals
Education	-.415 (.034)		12.782	.112	3.271
	-.655 (.125)	.026 (.013)	13.129	.114	3.267
Occupation	-1.639 (.209)		44.334	.049	20.103
	-2.371 (.771)	[.078] (.079)	45.391	.050	20.104
Annual Earnings	-393.00 (62.61)		9180.59	.032	6825.59
	-442.78 (231.06)	[5.33] (23.80)	9252.47	.032	6028.00
$\text{Earnings}^{1/3}$	-.310 (.040)		19.465	.048	3.866
	[-.266] (.148)	[-.005] (.015)	19.401	.048	3.867
Ln Annual Earnings	-.0524 (.007)		8.929	.043	.692
	[-.0369] (.027)	[-.0017] (.003)	8.907	.043	.693
Total Family Income	435.57 (84.91)		11210.75	.022	8171.98
	[-331.58] (313.36)	[-11.13] (32.28)	11060.57	.022	8175.02

Coefficients in brackets are less than 1.96 times their standard errors.

Table 6: Respondent Characteristics by Race: Males--Heads of Households, Aged 25-64 in 1965, Nonstudent, Nonmilitary, with Positive Earnings in 1964: PRODUCTIVE AMERICANS.

Race of Respondent	N	Education		Occupation		Annual Earnings		$\text{Earnings}^{1/3}$		Ln Earnings		Total Family Income	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Total	1392	11.093	3.469	37.324	20.473	7614.73	6340.07	18.199	4.011	8.714	.714	9449.10	8409.77
White	1241	11.349	3.324	38.936	20.253	7923.52	6231.62	18.521	3.876	8.775	.673	9825.80	8265.69
Black	123	8.541	3.784	22.764	16.208	4113.82	2381.94	14.895	3.324	8.094	.786	5358.77	3355.03
Other	13	11.000	4.719	32.615	25.367	6105.00	3384.40	17.152	3.230	8.557	.585	7199.92	3984.55
NA	15	10.933	2.581	27.400	13.381	10462.26	17282.00	18.338	6.977	8.636	1.009	13798.66	25145.32
		$\text{eta}^2 = .053$		$\text{eta}^2 = .053$		$\text{eta}^2 = .031$		$\text{eta}^2 = .064$		$\text{eta}^2 = .071$		$\text{eta}^2 = .026$	
		N = 1390		N = 1392		N = 1231		N = 1231		N = 1231		N = 1391	

Table 7A: Respondent Characteristics by Age Categories: Male Heads of Households, Aged 25-64 in 1965, Nonstudent, Nonmilitary, with Positive Earnings in 1964: PRODUCTIVE AMERICANS.

Age of Respondent	N	Education		Occupation		Annual Earnings		Earnings$^{1/3}$		Ln Earnings		Family Income	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Total	1392	11.093	3.469	37.324	20.474	7614.73	6340.15	18.199	4.011	8.714	.714	9449.11	8410.07
25-29	152	12.237	2.690	38.270	22.067	6099.34	2328.96	17.400	2.528	8.618	.505	7246.02	2771.90
30-34	163	11.951	3.514	39.859	21.545	7044.49	3502.62	18.110	3.066	8.728	.572	7906.07	4052.00
35-39	193	11.633	3.175	38.902	20.562	7524.44	3746.23	18.495	3.166	8.792	.567	8816.41	4822.06
40-44	204	11.642	3.090	37.819	19.862	8424.57	5977.09	18.953	3.826	8.853	.621	9827.86	6584.34
45-49	212	10.830	3.405	37.514	20.069	8354.12	6750.35	18.719	4.209	8.802	.683	11030.40	9259.24
50-54	193	10.601	3.585	36.813	20.106	8231.56	8894.07	18.411	4.617	8.719	.871	10884.61	12601.40
55-59	153	10.253	3.638	33.810	18.816	7459.14	7912.51	17.598	4.862	8.572	.867	9861.02	9856.11
60-64	122	9.037	3.687	34.320	20.122	7290.31	8710.68	17.205	5.224	8.482	.943	9084.81	11252.37
		$eta^2 = .067$		$eta^2 = .008$		$eta^2 = .014$		$eta^2 = .021$		$eta^2 = .025$		$eta^2 = .022$	
		N = 1390		N = 1392		N = 1231		N = 1231		N = 1231		N = 1391	

Table 7B: Regressions of Respondents Characteristics on Age for Male Heads of Households Aged 25-64 in 1965, Non-Student, Non-Military with Positive 1964 Earnings: PRODUCTIVE AMERICANS Complete Data Sample. (N=1188)

Dependent Variables	Unstandardized Coefficients (and Standard Errors) of Independent Variables				
	Age	Age^2	Constant	R^2	S.D. of Residuals
Education	-.0849		14.844	.071	3.345
	(.009)				
	[.0785]	-.0019	11.471	.074	3.340
	(.075)	(.001)			
Occupation	-.1393		43.946	.005	20.563
	(.055)				
	[.3685]	[-.0058]	33.462	.006	20.561
	(.462)	(.005)			
Annual Earnings	[30.54]		6302.44	.003	6115.88
	(16.35)				
	574.16	-6.18	-4920.94	.016	6077.38
	(136.56)	(1.54)			
Earnings$^{1/3}$	[-.0051]		18.465	.000	3.961
	(.011)				
	.4476	-.0051	9.118	.022	3.919
	(.088)	(.001)			
Ln Earnings	[-.0036]		8.881	.003	.707
	(.002)				
	.0752	-.0009	7.254	.024	.699
	(.016)	(.000)			
Family Income	80.17		6003.66	.011	8216.14
	(21.97)				
	795.91	-8.14	-8773.18	.024	8166.61
	(183.51)	(2.07)			

Coefficients in brackets are less than 1.96 times their standard errors.

Table 9A: Respondent Characteristics by Level of Education: Male Heads of Households, Aged 25-64 in 1965, Nonstudent, Nonmilitary, with Positive Earnings in 1964: PRODUCTIVE AMERICANS.

Educational Level	N	Occupation		Annual Earnings		Earnings$^{1/3}$		Ln Earnings		Family Income	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Total	1390	37.309	20.485	7621.42	6342.34	18.206	4.007	8.715	.713	9457.62	8412.57
0-5	82	20.561	11.248	3436.04	2275.43	13.966	3.213	7.906	.722	4445.05	3202.57
6-8	265	24.985	12.616	5081.47	3217.79	15.941	3.606	8.298	.795	6817.70	4059.20
9-11	270	29.130	14.188	6761.98	4471.04	17.753	3.249	8.665	.571	8341.63	4790.21
HS	415	37.217	17.953	7620.38	4128.53	18.621	2.987	8.818	.546	9312.72	5570.86
Some College	159	47.874	20.017	8940.88	5133.47	19.577	3.257	8.972	.503	10809.44	6069.09
BA	151	60.808	15.484	11788.50	10960.06	21.099	4.268	9.186	.567	14876.70	16883.25
Grad Degree	48	71.854	7.877	16040.80	13059.15	23.180	5.231	9.455	.640	18712.96	16038.16
		$\text{eta}^2 = .411$		$\text{eta}^2 = .172$		$\text{eta}^2 = .257$		$\text{eta}^2 = .250$		$\text{eta}^2 = .133$	
		N = 1390		N = 1229		N = 1229		N = 1229		N = 1389	

Table 9B: Regressions of Occupation, Earnings and Family Income on Education for Male Heads of Households, Aged 25-64 in 1965, Nonstudent, Nonmilitary, with Positive 1964 Earnings: PRODUCTIVE AMERICANS -- complete data sample (N=1188) C51

Unstandardized Regression Coefficients (and Standard Errors)

Dependent Variable	Years of Education	Education^2	Years Higher Education	College Graduation	Graduate Degree	Vocational Training	Constant	R^2	S.D. of Residuals
Occupation	3.5093 (.139)						-1.245	.349	16.638
	-2.3634 (.606)	.2778 (.028)					26.364	.399	15.993
	1.7588 (.223)		4.9545 (.816)	[-.9749] (3.078)	*	5.5406 (1.505)	13.212	.401	15.980
Annual Earnings	690.18 (47.17)						-62.11	.153	5637.21
	[-243.02] (212.04)	44.14 (9.78)					4325.14	.167	5591.75
	493.43 (71.55)		[166.19] (299.17)	[1100.17] (1093.81)	3355.66 (1131.54)	*	1705.53	.173	5577.81
Earnings$^{1/3}$	.5658 (.029)						11.935	.246	3.441
	.3555 (.130)	[.0099] (.006)					12.924	.247	3.439
	.5267 (.044)		[.0680] (.164)	[.2352] (.657)	*	*	12.276	.247	3.440
Ln Earnings	.0995 (.005)						7.614	.238	.618
	.1057 (.023)	[-.0003] (.001)					7.585	.238	.618
	.1036 (.008)		[-.0171] (.029)	[.0295] (.118)	*	*	7.578	.238	.618
Family Income	805.27 (65.06)						517.29	.114	7775.27
	[-313.70] (293.07)	52.92 (13.52)					5777.87	.126	7728.73
	519.64 (97.99)		[569.10] (367.52)	[1279.69] (1476.06)	*	*	3006.76	.127	7725.76

I have omitted from this table equations employing the very complicated set of dummies and splines for nonlinearities that appear in other chapters. Most of these nonlinear terms did not have significant coefficients for PA data. Others that did were so differently coded as to be misleading in comparisons to OCG or Census results. I have included a Graduate Degree dummy to control for the major education coding difference between PA and other surveys.

*Coefficient less than twice its standard error when added to equation shown.

Table 10: Regressions of Occupation, Earnings and Family Income on Education and Experience for Male Heads of Households, Aged 25-64 in 1965, Nonstudent, Nonmilitary, with Positive 1964 Earnings: PRODUCTIVE AMERICANS - complete data sample (N = 1188)

Dependent Variable	Unstandardized Regression Coefficients (and Standard Errors) Education	Years of Higher Education	College Graduation	Experience	Experience^2	Constant	R^2	SD of Residuals
Occupation	2.102 (.204)	3.857 (.765)	[.560] (3.071)			10.922	.394	16.071
	2.330 (.220)	3.732 (.764)	[.830] (3.064)	.120 (.044)		5.457	.397	16.029
	2.363 (.224)	3.672 (.767)	[.766] (3.065)	[-.021] (.170)	[.003] (.003)	6.544	.398	16.031
Annual Earnings	461.55 (70.98)	577.87 (266.22)	[357.81] (1069.21)			1919.48	.167	5596.29
	629.71 (75.82)	[484.64] (263.14)	[557.91] (1055.42)	88.48 (15.30)		-2128.54	.190	5521.16
	564.92 (76.28)	599.08 (261.72)	[682.25] (1045.78)	360.28 (57.92)	-5.32 (1.09)	-4236.09	.205	5469.08
Earnings$^{1/3}$	.5247 (.044)	[.0795] (.164)	[.1968] (.658)			12.293	.247	3.442
	.6092 (.047)	[.0327] (.163)	[.2973] (.652)	.0445 (.009)		10.259	.261	3.411
	.5673 (.047)	[.1067] (.162)	[.3777] (.646)	.2202 (.036)	-.0034 (.001)	8.897	.276	3.376
Ln Earnings	.1036 (.008)	[-.0171] (.029)	[.0295] (.118)			7.578	.238	.618
	.1136 (.008)	[-.0226] (.029)	[.0413] (.118)	.0052 (.002)		7.339	.244	.616
	.1069 (.009)	[-.0108] (.029)	[.0541] (.117)	.0332 (.006)	-.0005 (.000)	7.122	.257	.611
Family Income	519.64 (97.99)	[569.10] (367.52)	[1279.69] (1476.06)			3006.26	.127	7725.76
	806.93 (103.89)	[409.83] (360.53)	[1621.55] (1446.04)	151.17 (20.97)		-3909.45	.164	7564.59
	710.64 (104.33)	[579.91] (357.95)	[1806.35] (1430.30)	555.10 (79.22)	-7.90 (1.50)	-7041.58	.183	7479.98

Coefficients in brackets are less than 1.96 times their standard errors.

Table 13A: Regressions of EDUCATION on Characteristics of Non-Military, Non-Student Male Heads of Households, Aged 25-64 in 1965, with Positive 1964 Earnings: PRODUCTIVE AMERICANS Complete Data Sample.
(N = 1188)

Independent Variables — Unstandardized (B) and Standardized (Beta) Regression Coefficients (and Stardard Errors) for Selected Equations

Independent Variables		(1)		(2)		(3)		(5)	
	r	B	Beta	B	Beta	B	Beta	B	Beta
White	.211	1.2183 (.310)	.102	1.3061 (.311)	.109	1.4380 (.302)	.120	1.4472 (.300	.121
Father's Education	.414	.3372 (.028)	.308	.3343 (.028)	.305	.3188 (.027)	.291	.3180 (.027)	.291
Father Foreign	.040	[-.3371] (.229)	-.039	[-.3631] (.230)	-.042	[-.2552] (.223)	-.029	[-.2451] (.223)	-.028
Siblings	-.334	-.2348 (.032)	-.189	-.2329 (.032)	-.188	-.2114 (.031)	-.170	.2217 (.031)	-.179
Non-Farm Upbringing	.324	1.2005 (.194)	.169	1.1932 (.194)	.168	1.0569 (.189)	.148	1.0566 (.188)	.148
Non-South Upbringing	.255	.8003 (.208)	.108	.8102 (.208)	.109	.8547 (.202)	.115	.8252 (.200)	.111
Father's Education^2	.062	+		.0154 (.005)	.069	.0151 (.005)	.068	.0162 (.005)	.073
Siblings^2	.055	[+]		[.0178] (.012)	(.038)	[.0148] (.011)	.031	[.0179] (.011)	.038
Age	-.266	-		-		-.0653 (.008)	-.204	-.0651 (.008)	-.204
White x Non-Farm	-.063	-		-		-		-1.6970 (.570)	-.071
White x Age	.058	-		-		+		.0545 (.025)	.053
Father's Education x Age	.035	-		-		+		.0050 (.002)	.049
Constant		7.065		8.307		11.047		14.276	
R^2		.293		.299		.339		.351	
S.D. of Residual		2.924		2.914		2.830		2.809	

Coefficients in brackets are less than 1.96 times their standard errors.
Signs indicate the sign of the coefficient if this was the next variable entered.

Table 13C: Regressions of EDUCATION on Characteristics of Male Heads of Households, Aged 25-64, Non-Student, Non-Military, with Positive 1964 Earnings; by AGE categories: PRODUCTIVE AMERICANS Complete Data Sample. (N = 1188)

Independent Variables	Unstandardized Regression Coefficients (with Standard Errors) and Zero-Order Correlations (r) with Education							
	Age 25-34		Age 35-44		Age 45-54		Age 55-64	
	B	r	B	r	B	r	B	r
White	[.1867] (.469)	.191	[.9780] (.569)	.234	2.0465 (.701)	.212	2.1564 (.730)	.289
Father's Education	.3090 (.049)	.488	.2699 (.048)	.382	.2654 (.055)	.303	.5260 (.071)	.518
Siblings	-.3455 (.057)	-.453	-.2507 (.057)	-.401	-.1488 (.070)	-.268	[-.1203] (.071)	-.153
Non-Farm Upbringing	.8048 (.342)	.320	1.4456 (.329)	.408	1.1459 (.396)	.296	[.5389] (.433)	.196
Non-South Upbringing	.8283 (.334)	.249	.9986 (.340)	.316	.8489 (.421)	.272	[.3922] (.489)	.227
Age	[.0363] (.051)	-.059	[-.0479] (.050)	-.039	[-.0442] (.058)	-.035	[-.1415] (.075)	-.182
Constant	8.475		9.801		8.421		11.915	
R^2	.374		.342		.216		.333	
S.D. of Residuals	2.481		2.616		3.102		3.055	
Education Mean	12.179		11.643		10.801		9.616	
Std. Dev.	3.102		3.197		3.473		3.692	
N	290		338		331		229	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 14A: Regressions of Occupation on Characteristics of Nonstudent, Nonmilitary, Male Heads of Households, Aged 25-64 in 1965, With Positive 1964 Earnings: PRODUCTIVE AMERICANS -- Complete Data Sample.

		Unstandardized (B) and Standardized (Beta) Regression Coefficients (and Standard Errors) for Selected Equations					
	r	1 B	Beta	2 B	Beta	5 B	Beta
White	.213	11.1594 (1.994)	.157	11.3758 (1.993)	.160	11.3789 (1.990)	.160
Father's Education	.306	1.4895 (.181)	.229	1.4853 (.181)	.228	1.4633 (.181)	.225
Father Foreign	.061	[.7928] (1.476)	.015	[.5635] (1.477)	.011	[.5246] (1.475)	.010
Siblings	-.222	-.7520 (.208)	-.102	-.7404 (.208)	-.100	-.7576 (.207)	-.103
Non Farm Upbringing	.267	7.4120 (1.250)	.175	7.4285 (1.248)	.176	7.3792 (1.247)	.174
Non South Upbringing	.145	[-.5764] (1.338)	-.013	[-.4701] (1.337)	-.011	[-.4266] (1.335)	-.010
Father's Education^2	.054	+		.0790 (.035)	.060	.0759 (.035)	.057
White x Non South	-.069	-		-		-8.9341 (4.412)	-.054
Education	.591						
Vocational Training	.039						
Years Higher Education	.582						
College Graduation (Non-selective)	.514						
Very Highly Selective Col.	.180						
Highly Selective College	.220						
Selective College	.193						
College Not Ascertained	.139						
Experience	-.222						
Years Higher Education x Exp.	-.009						
Non Farm x Experience	.003						
Constant		14.520		19.735		17.856	
R^2		.172		.175		.178	
SD of Residuals		18.804		18.771		18.747	

Table 14A: Continued (2)

Unstandardized (B) and Standardized (Beta) Regression Coefficients (and Standard Errors) for Selected Equations

	6 B	Beta	7 B	Beta	8 B	Beta
White	8.515 (1.690)	.120	8.076 (1.694)	.114	8.114 (1.687)	.114
Father's Education	[.250] (.164)	.038	[.255] (.164)	.039	[.244] (.163)	.038
Father Foreign	[1.355] (1.253)	.026	[1.234] (1.251)	.024	[1.033] (1.248)	.020
Siblings	[-.026] (.178)	-.003	[-.042] (.178)	-.006	[-.020] (.178)	-.003
Non Farm Upbringing	3.884 (1.064)	.092	4.005 (1.062)	.095	3.912 (1.059)	.092
Non South Upbringing	[-1.308] (1.142)	-.030	[-1.519] (1.142)	-.034	[-1.696] (1.138)	-.038
Father's Education^2	[-.025] (.030)	-.019	[-.024] (.030)	-.018	[-.025] (.030)	-.019
White x Non South	[-4.166] (3.730)	-.025	[-4.260] (3.721)	-.026	[-4.533] (3.706)	-.027
Education	1.274 (.241)	.214	1.492 (.254)	.251	1.566 (.260)	.264
Vocational Training	5.650 (1.486)	.096	5.914 (1.486)	.100	5.995 (1.480)	.102
Years Higher Education	5.185 (.832)	.415	5.083 (.830)	.407	5.230 (.828)	.419
College Graduation (Non-selective)	[.703] (3.312)	.012	[.961] (3.305)	.017	[.153] (3.316)	.003
Very Highly Selective Col.	[-.786] (4.198)	-.005	[-.900] (4.187)	-.005	[-.385] (4.172)	-.002
Highly Selective College	[-4.202] (3.135)	-.037	[-4.552] (3.130)	-.040	[-3.653] (3.135)	-.032
Selective College	[-2.707] (3.353)	-.021	[-2.414] (3.347)	-.019	[-2.851] (3.337)	-.022
College Not Ascertained	[-.404] (4.989)	-.002	[-.374] (4.977)	-.002	[-.341] (4.959)	-.002
Experience	+		.117 (.044)	.068	.125 (.044)	.073
Years Higher Education x Exp.	-		-		-.075 (.028)	-.064
Non Farm x Experience	+		+		.214 (.082)	-.059
Constant	4.388		-.403		.857	
R^2	.425		.429		.435	
SD of Residual	15.732		15.692		15.624	

Coefficients in brackets are less than 1.96 times their standard errors.

signs indicate the sign of the coefficient if this was the next variable entered in the equation.

Table 14C: Regressions of OCCUPATION on Characteristics of Male Heads of Households, Aged 25-64, Non-Student, Non-Military, with Positive 1964 Earnings, by AGE categories: PRODUCTIVE AMERICANS Complete Data Sample. (N=1188)

Independent Variables	Unstandardized Regression Coefficients (with Standard Errors) and Zero-Order Correlations (r) with OCCUPATION							
	Age 25-34		Age 35-44		Age 45-54		Age 55-64	
	B	r	B	r	B	r	B	r
White	9.499 (2.887)	.240	10.498 (3.452)	.244	[4.925] (3.700)	.148	[7.107] (3.823)	.220
Father's Education	[-.115] (.324)	.350	.646 (.308)	.342	[.175] (.300)	.208	[.278] (.403)	.328
Siblings	[-.145] (.375)	-.307	[-.025] (.354)	-.276	[-.331] (.369)	-.127	[-.274] (.360)	-.124
Non-Farm Upbringing	[.564] (2.116)	.221	[3.259] (2.042)	.307	7.065 (2.085)	.268	6.000 (2.213)	.237
Non-South Upbringing	[-.183] (2.067)	.178	[-2.840] (2.139)	.140	[-1.864] (2.230)	.127	[-2.314] (2.504)	.135
Education	1.560 (.663)	.665	1.572 (.555)	.600	1.278 (.508)	.561	2.132 (.553)	.552
Vocational Training	[3.919] (2.716)	-.094	5.558 (2.662)	.048	7.058 (2.871)	.110	[5.965] (4.752)	.088
Years Higher Education	6.790 (1.612)	.696	3.777 (1.508)	.560	3.869 (1.631)	.509	6.363 (2.018)	.517
College Graduation	[-1.492] (5.544)	.630	[-1.141] (5.375)	.491	[.716] (6.368)	.446	[-7.414] (8.554)	.426
Experience	[.207] (.318)	-.448	[-.361] (.294)	-.456	[-.327] (.289)	-.432	1.179 (.376)	-.342
Constant	2.413		8.961		19.941		-48.145	
R^2	.538		.427		.376		.403	
S.D. of Residuals	15.161		15.768		16.093		15.416	
OCCUPATION Mean	39.210		39.118		37.819		34.450	
Std. Dev.	21.920		20.526		20.064		19.511	
N	290		338		331		229	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 15A: Regressions of ANNUAL EARNINGS on Characteristics of Male Heads of Households, Aged 25-64 in 1965, Non-Student, Non-Military, with Positive 1964 Earnings: PRODUCTIVE AMERICANS Complete Data Sample. (N=1188)

Independent Variables	Unstandardized (B) and Standardized (Beta) Regression Coefficients (and Standard Errors) for Selected Equations										
		1		6		7		8		9	
	r	B	Beta	B	Beta	B	Beta	B	Beta	B	Beta
White	.170	2543.81 (614.99)	.120	1984.77 (584.49)	.094	1572.07 (573.19)	.074	1406.23 (571.40)	.067	1164.90 (574.82)	.055
Father's Education	.234	333.99 (55.88)	.173	[105.21] (56.78)	.054	130.81 (55.54)	.068	138.34 (54.97)	.072	130.67 (54.83)	.068
Father Foreign	.071	[473.92] (455.16)	.031	[487.82] (433.16)	.032	[308.65] (423.14)	.020	[340.40] (418.11)	.022	[305.20] (416.78)	.020
Siblings	-.179	-186.83 (64.10)	-.085	[-50.07] (61.74)	-.023	[-84.04] (60.41)	-.038	[-102.62] (59.69)	-.047	[-102.38] (59.47)	-.047
Non-Farm Upbringing	.212	1652.89 (385.70)	.132	1096.59 (368.58)	.087	1257.64 (360.10)	.100	1239.27 (355.80)	.099	1121.80 (356.62)	.089
Non-South Upbringing	.132	[63.23] (412.85)	.005	[-230.49] (395.17)	-.018	[-296.11] (386.76)	-.023	[-200.95] (383.68)	-.015	[-155.30] (382.61)	-.012
Education	.391			333.14 (84.15)	.189	400.94 (88.20)	.227	408.75 (92.38)	.232	365.83 (93.12)	.207
Vocational Training	.012			[294.33] (520.59)	.017	[552.25] (509.20)	.032	[574.52] (505.00)	.033	[391.17] (506.77)	.022
Years Higher Education	.370			[195.97] (322.91)	.053	[269.65] (315.87)	.073	[181.08] (323.33)	.049	[14.52] (326.76)	.004
Graduate Degree	.260			2942.11 (1147.46)	.088	2835.42 (1119.91)	.085	2894.99 (1107.74)	.086	2991.73 (1104.26)	.089
College Graduation (Non-Selective)	.328			[-714.55] (1191.05)	-.041	[-308.53] (1163.16)	-.018	[-217.23] (1154.57)	-.013	[-211.20] (1150.47)	-.012
Very Highly Selective College	.186			5201.65 (1474.08)	.104	4928.52 (1438.55)	.098	4545.63 (1430.23)	.091	4544.18 (1425.15)	.091
Highly Selective College	.190			2991.88 (1092.24)	.088	2238.16 (1070.53)	.066	[2086.75] (1068.13)	.062	2204.15 (1065.03)	.065

Table 15A: Regressions of ANNUAL EARNINGS on Characteristics of Male Heads of Households, Aged 25-64 in 1965, Non-Student, Non-Military, with Positive 1964 Earnings: PRODUCTIVE AMERICANS Complete Data Sample. (N=1188)

Independent Variables		Unstandardized (B) and Standardized (Beta) Regression Coefficients (and Standard Errors) for Selected Equations									
		1		6		7		8		9	
	r	B	Beta	B	Beta	B	Beta	B	Beta	B	Beta
Selective College	.212			5244.11 (1160.62)	.139	5559.80 (1132.90)	.147	5650.75 (1123.77)	.149	5717.12 (1119.99)	.151
College Not Ascertained	.041			[-875.48] (1728.57)	-.014	[-693.44] (1686.28)	-.011	[-125.79] (1670.37)	-.002	[-126.77] (1664.44)	-.002
Experience	-.051			+		83.53 (14.99)	.164	85.28 (14.98)	.167	81.93 (14.96)	.161
Experience^2	.126			-		-5.80 (1.08)	-.141	-5.27 (1.09)	-.128	-5.30 (1.09)	-.129
Graduate Degree x Experience	.148			+		+		333.85 (81.44)	.107	339.44 (81.17)	.108
Siblings x Education	-.102			-		-		-64.96 (16.82)	-.105	-66.91 (16.77)	-.108
Non-South x Education	-.022			-		-		-285.24 (100.09)	-.078	-287.92 (99.74)	-.078
Occupation	.336			+		+		+		29.73 (9.73)	.100
Constant		2245.99		338.67		-5414.40		-9512.11		-9704.54	
R^2		.107		.219		.258		.280		.286	
S.D. of Residuals		5800.44		5445.39		5311.60		5238.96		5220.35	

Coefficients in brackets are less than 1.96 times their standard errors.

Signs indicate the sign of the coefficient if this was the next variable entered in the equation.

Table 16A: Regressions of Ln Annual Earnings on Characteristics of Male Heads of Households, Aged 25-64, Nonstudent, Nonmilitary, with Positive 1964 Earnings: PRODUCTIVE AMERICANS -- Complete Data Sample. (N=1188)

Unstandardized (B) and Standardized (Beta) Regression Coefficients (and Standard Errors) for Selected Equations.

	r	1 B	Beta	2 B	Beta	6 B	Beta	7 B	Beta
White	.257	.4510 (.068)	.185	.4309 (.068)	.177	.3294 (.064)	.135	.3055 (.064)	.125
Father's Education	.260	.0385 (.006)	.172	.0390 (.006)	.174	[.0116] (.006)	.052	.0141 (.006)	.063
Father Foreign	.142	.1158 (.050)	.065	.1131 (.050)	.063	.1394 (.047)	.078	.1258 (.047)	.071
Siblings	-.207	-.0189 (.007)	-.075	-.0185 (.007)	-.073	[.0006] (.007)	.002	[-.0023] (.007)	-.009
Non Farm Upbringing	.306	.2894 (.042)	.199	.2788 (.043)	.192	.1856 (.040)	.128	.1974 (.040)	.136
Non South Upbringing	.232	.0821 (.045)	.054	.0905 (.045)	.060	[.0240] (.043)	.016	[.0261] (.043)	.017
Father's Ed. x Non South	-.109	-		-.0295 (.013)	-.060	-.0289 (.012)	-.058	-.0288 (.012)	-.058
Education	.488					.0759 (.009)	.372	.0738 (.010)	.362
Vocational Training	.067					[.0389] (.056)	.019	[.0535] (.056)	.026
Years Higher Ed.	.353					[-.0044] (.031)	-.010	[.0059] (.031)	.014
College Graduation (Non-Selective)	.303					[-.0610] (.125)	-.031	[-.0262] (.123)	-.013
Very Highly Selective College	.148					.3659 (.158)	.063	.3397 (.156)	.059
Highly Selective College	.166					[.1839] (.118)	.047	[.1193] (.117)	.030
Selective College	.153					.2475 (.127)	.057	.2676 (.125)	.061
College Not Ascertained	.057					[-.0433] (.188)	-.006	[-.0281] (.186)	-.004
Experience	-.170					+		.0037 (.002)	.063
Experience^2	-.140					-		-.0006 (.000)	-.126

Table 16A: Continued (2)

		Unstandardized (B) and Standardized (Beta) Regression Coefficients (and Standard Errors) for Selected Equations.							
	r	1 B	Beta	2 B	Beta	6 B	Beta	7 B	Beta
Father Foreign x Education	-.099					-		-	
Siblings x Education	-.035					-		-	
Ln Weeks Worked	.463					+		+	
Occupation	.403					+		+	
Constant		7.825		7.687		7.166		6.773	
R^2		.191		.194		.303		.321	
SD of Residual		.638		.637		.594		.587	

Table 16A: Continued (3)

	Unstandardized (B) and Standardized (Beta) Regression Coefficients (and Standard Errors) for Selected Equations.					
	8 B	Beta	9 B	Beta	10B	Beta
White	.2961 (.064)	.121	.2439 (.057)	.100	.1950 (.057)	.080
Father's Education	.0131 (.006)	.059	[.0102] (.005)	.046	[.0087] (.005)	.039
Father Foreign	.1317 (.047)	.074	.1043 (.042)	.058	.0965 (.041)	.054
Siblings	[-.0021] (.007)	-.008	[-.0036] (.006)	-.014	[-.0034] (.006)	-.013
Non Farm Upbringing	.1959 (.040)	.135	.1906 (.036)	.131	.1665 (.035)	.115
Non South Upbringing	[.0115] (.043)	.008	[.0399] (.039)	.026	[.0508] (.038)	.034
Father's Education x Non South	[-.0232] (.012)	-.047	-.0232 (.011)	-.047	-.0273 (.011)	-.055
Education	.0795 (.010)	.390	.0557 (.009)	.273	.0468 (.009)	.229
Vocational Training	[.0511] (.055)	.025	[.0643] (.050)	.032	[.0306] (.049)	.015
Years Higher Education	[-.0034] (.031)	-.008	[.0327] (.028)	.076	[.0037] (.028)	.009
College Graduation (Non-Selective)	[-.0456] (.124)	-.023	[-.0795] (.111)	-.040	[-.0826] (.109)	-.041
Very Highly Selective College	.3441 (.156)	.059	.3481 (.140)	.060	.3533 (.138)	.061
Highly Selective College	[.1444] (.118)	.037	[.1453] (.106)	.037	[.1699] (.104)	.043
Selective College	.2885 (.125)	.066	.3298 (.112)	.075	.3415 (.111)	.078
College Not Ascertained	[.0631] (.188)	.009	[.0528] (.168)	.007	[.0506] (.166)	.007
Experience	.0042 (.002)	.071	.0055 (.001)	.093	.0049 (.001)	.083
Experience^2	-.0006 (.000)	-.126	-.0006 (.000)	-.117	-.0006 (.000)	-.119

Table 16A: Continued (4)

Final Nos.
12/30/75

Unstandardized (B) and Standardized (Beta) Regression Coefficients (and Standard Errors) for Selected Equations.

	8 B	Beta	9 B	Beta	10B	Beta
Father Foreign x Education	-.0420	-.079	-.0412	-.078	-.0391	-.074
	(.013)		(.012)		(.012)	
Siblings x Education	-.0039	-.055	-.0036	-.050	-.0039	-.055
	(.002)		(.002)		(.002)	
Ln Weeks Worked	+		.9911	.375	1.0036	.380
			(.059)		(.058)	
Occupation	+		+		.0057	.167
					(.001)	
Constant	6.491		2.968		2.876	
R^2	.330		.461		.477	
SD of Residuals	.584		.524		.516	

Coefficients in brackets are less than 1.96 times their standard errors.

Signs indicate the sign of the coefficient if this was the next variable entered in the equation.

Table 16C: Regressions of Ln Earnings on Characteristics of Male Heads of Households Aged 25-64, Nonstudent, Nonmilitary, With Positive Earnings in 1964, by Age Categories: PRODUCTIVE AMERICANS -- Complete Data Sample. Ch6

	Unstandardized Regression Coefficients (with Standard Errors) and Zero-order Correlations (r) with Ln Earnings							
	Age 25-34		35-44		45-54		55-64	
	B	r	B	r	B	r	B	r
White	.1980 (.084)	.257	.3989 (.104)	.310	.8255 (.151)	.339	[-.1068] (.192)	.138
Father's Education	[.0051] (.009)	.300	.0195 (.009)	.322	[.0171] (.012)	.205	[.0144] (.020)	.297
Siblings	[-.0143] (.011)	-.292	[.0007] (.011)	-.299	[.0052] (.015)	-.174	[-.0019] (.018)	-.092
Non Farm Upbringing	.1563 (.061)	.307	.2053 (.062)	.379	.2861 (.085)	.290	.2626 (.111)	.268
Non South Upbringing	[.0681] (.060)	.241	[-.0016] (.065)	.243	[.0124] (.091)	.226	[.1710] (.126)	.232
Education	.0914 (.019)	.517	.0768 (.017)	.570	.0498 (.021)	.440	.1079 (.028)	.473
Years Higher Education	[.0176] (.047)	.399	[-.0004] (.046)	.433	[.0107] (.067)	.329	[.0414] (.101)	.314
College Graduation	[-.0936] (.161)	.372	[.0811] (.163)	.385	[.0788] (.260)	.276	[-.1946] (.429)	.245
Vocational Training	[.1010] (.079)	.054	[.0851] (.081)	.087	[-.1163] (.117)	.012	[.0881] (.238)	.107
Experience	.0262 (.009)	-.297	[.0030] (.009)	-.373	[-.0155] (.012)	-.336	[.0155] (.019)	-.329
Constant	6.962		7.189		7.630		6.572	
R^2	.341		.396		.300		.267	
SD of Residuals	.440		.477		.658		.773	
Ln Earnings Mean	8.677		8.825		8.786		8.541	
S.D.	.532		.605		.775		.883	
N	290		338		33[illegible]		229	

Coefficients in brackets are less than 1.96 times their standard error.

Table 17: Regressions of Earnings$^{1/3}$ on Characteristics of Male Heads of Households, Aged 25-64, Nonstudent, Nonmilitary, With Positive Earnings in 1964: PRODUCTIVE AMERICANS -- Complete Data Sample.

		Unstandardized (B) and Standardized (Beta) Regression Coefficients (and Standard Errors) for Selected Equations					
	r	1 B	Beta	2 B	Beta	6 B	Beta
White	.246	2.363 (.379)	.173	2.264 (.382)	.166	1.729 (.357)	.127
Father's Education	.276	.237 (.034)	.189	.239 (.034)	.191	.076 (.034)	.061
Father Foreign	.128	.556 (.280)	.056	[.542] (.280)	.054	.647 (.263)	.065
Siblings	-.219	-.124 (.039)	-.088	-.122 (.039)	-.086	[-.015] (.037)	-.010
Non Farm Upbringing	.303	1.575 (.238)	.194	1.523 (.239)	.187	1.021 (.225)	.126
Non South Upbringing	.222	[.409] (.254)	.048	[.450] (.255)	.053	[.125] (.241)	.015
Father's Education x Non-South	-.101	-		-.146 (.074)	-.053	-.155 (.069)	-.056
Education	.496					.377 (.051)	.033
Vocational Training	.053					[.235] (.316)	.021
Years Higher Education	.392					[-.001] (.196)	-.000
Graduate Degree	.236					[1.100] (.696)	.051
College Graduation (Non-selective)	.341					[-.259] (.722)	-.023
Very Highly Selective College	.177					2.614 (.894)	.081
Highly Selective College	.190					1.367 (.663)	.062
Selective College	.183					2.042 (.703)	.083
College Not Ascertained	.058					[-.448] (1.049)	-.011

Table 17: Continued (2)

		Unstandardized (B) and Standardized (Beta) Regression Coefficients (and Standard Errors) for Selected Equations		
	r	1 B	2 B	6 B
Experience	-.136			
Experience^2	-.145			
Graduate Degree x Experience	.118			
Siblings x Education	-.065			
Father Foreign x Education	-.082			
Occupation	.418			
Constant		13.347	12.664	10.113
R^2		.191	.193	.315
SD of Residual		3.572	3.568	3.300

Table 17: Continued (3)

	Unstandardized (B) and Standardized (Beta) Regression Coefficients (and Standard Errors) for Selected Equations					
	7 B	Beta	8 B	Beta	9 B	Beta
White	1.528 (.351)	.112	1.502 (.349)	.110	1.258 (.349)	.092
Father's Education	.092 (.034)	.074	.091 (.034)	.073	.084 (.033)	.067
Father Foreign	.548 (.258)	.055	.604 (.256)	.060	.567 (.253)	.057
Siblings	[-.035] (.037)	-.024	[-.038] (.036)	-.027	[-.037] (.036)	-.026
Non Farm Upbringing	1.110 (.220)	.136	1.114 (.219)	.137	.993 (.218)	.122
Non South Upbringing	[.113] (.236)	.013	[.045] (.235)	.005	[.099] (.233)	.012
Father's Education x Non South	-.152 (.067)	-.055	[-.126] (.067)	-.045	-.147 (.067)	-.053
Education	.389 (.054)	.341	.428 (.055)	.375	.385 (.055)	.337
Vocational Training	[.360] (.310)	.032	[.313] (.308)	.028	[.133] (.307)	.012
Years Higher Education	[.057] (.193)	.024	[-.058] (.195)	-.024	[-.221] (.196)	-.092
Graduate Degree	[1.071] (.682)	.049	[1.210] (.670)	.056	[1.301] (.670)	.060
College Graduation (Nonselective)	[-.018] (.708)	-.002	[-.010] (.707)	-.001	[.004] (.700)	.000
Very Highly Selective College	2.441 (.876)	.075	2.234 (.874)	.069	2.233 (.866)	.069
Highly Selective College	[.920] (.652)	.042	[.874] (.654)	.040	[.983] (.648)	.045
Selective College	2.203 (.690)	.090	2.279 (.688)	.093	2.334 (.681)	.095
College Not Ascertained	[-.343] (1.027)	-.009	[.256] (1.036)	.006	[.241] (1.026)	.006

	Unstandardized (B) and Standardized (Beta) Regression Coefficients (and Standard Errors) for Selected Equations					
	7 B	Beta	8 B	Beta	9 B	Beta
Experience	.037 (.009)	.112	.040 (.009)	.122	.037 (.009)	.111
Experience^2	-.004 (.001)	-.142	-.003 (.001)	-.128	-.004 (.001)	-.129
Graduate Degree x Experience	+		.142 (.050)	.070	.148 (.049)	.073
Siblings x Education	-		-.032 (.010)	-.080	-.034 (.010)	-.085
Father Foreign x Education	-		-.198 (.073)	-.067	-.187 (.072)	-.063
Occupation	+		+		.029 (.006)	.152
Constant	7.087		5.256		5.014	
R^2	.344		.357		.370	
SD of Residual	3.233		3.204		3.172	

Coefficients in brackets are less than 1.96 times their standard errors.

Signs indicate the sign of the coefficient if this was the next variable entered in the equation.

Table 18: Regressions of Family Income on Characteristics of Male Heads of Households, Aged 25-64 in 1965, Nonstudent, Nonmilitary, with Positive 1964 Earnings: PRODUCTIVE AMERICANS complete data sample. (N = 1188)

Unstandardized (B) and Standardized (Beta) Regression Coefficients (and Standard Errors) for Selected Equations

		1		6		7		8	
	r	B	Beta	B	Beta	B	Beta	B	Beta
White	.150	3024.50 (840.99)	.106	2320.92 (808.98)	.081	1623.88 (785.22)	.057	[1456.99] (780.83)	.051
Father's Education	.217	435.08 (76.42)	.167	158.38 (78.52)	.061	197.57 (76.03)	.076	203.68 (74.95)	.078
Father Foreign	.053	[414.36] (622.43)	.020	[450.44] (599.60)	.022	[160.94] (579.76)	.008	[195.07] (571.25)	.009
Siblings	-.147	-187.95 (87.66)	-.064	[-22.56] (85.39)	-.008	[-76.39] (82.69)	-.026	[-114.24] (81.56)	-.039
Non Farm Upbringing	.177	1796.97 (527.44)	.106	1104.66 (509.79)	.065	1369.10 (493.02)	.081	1395.67 (485.96)	.082
Non South Upbringing	.115	[147.47] (564.56)	.008	[-166.25] (546.92)	-.009	[-306.89] (529.86)	-.017	[-116.24] (524.18)	-.007
Education	.338			369.88 (114.98)	.155	515.54 (119.71)	.217	428.20 (125.51)	.180
Vocational Training	-.013			[-44.01] (711.44)	-.002	[379.38] (688.63)	.016	[364.40] (680.76)	.015
Years Higher Education	.326			[403.59] (393.66)	.081	[471.91] (381.94)	.094	[356.88] (391.06)	.071
College Graduation (Non-selective)	.297			[-1028.59] (1581.37)	-.044	[-331.78] (1528.79)	-.014	[565.88] (1522.32)	.024
Very Highly Selective College	.213			10549.00 (2006.79)	.156	10086.03 (1938.41)	.149	9973.88 (1916.95)	.148
Highly Selective College	.148			3323.84 (1500.15)	.073	[2119.73] (1455.45)	.046	[1731.29] (1449.67)	.038
Selective College	.204			7322.53 (1605.95)	.144	7842.46 (1551.56)	.154	8348.49 (1535.66)	.164
College Not Ascertained	.021			[-1483.38] (2381.96)	-.018	[-1227.56] (2300.01)	-.015	[-787.47] (2266.12)	-.010
Experience	.009			+		146.87 (20.53)	.213	141.62 (20.49)	.206
Experience^2	-.138			-		-8.59 (1.48)	-.154	-5.39 (1.63)	-.097
Years Higher Ed. x Experience	.197			+		+		72.87 (13.93)	.155
Siblings x Education	-.075			-		-		-71.36 (23.02)	-.085
Non South x Education	-.032			-		-		-426.55 (136.42)	-.086
Constant		2736.34		781.72		-8708.35		-10225.70	
R^2		.082		.177		.234		.261	
SD of Residuals		7932.04		7538.33		7278.16		7158.74	

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Coefficients in brackets are less than 1.96 times their standard errors.

Signs indicate the sign of the coefficient if this was the next variable entered in the equation.

Table 19

This is how I computed the orthogonalized quadratic and interaction terms that appear in PA multivariate tables.

Orthogonal Term — Definition

Father's Education^2 = (Father's Education) (Father's Education - 17.899)

Siblings^2 = (Siblings) (Siblings - 9.350)

White x Non-Farm = (Respondent White) (Non-Farm Upbringing)
-.493 (Respondent White) - .895 (Non-Farm Upbringing)

White x Age = (Respondent White) (Age) - 42.185 (Respondent White)
-.892 (Age)

Father's Education x Age = (Father's Education) (Age) - 42.371 (Father's Education)
-7.938 (Age)

White x Non-South = (Respondent White) (Non-South Upbringing)
-.251 (Respondent White) - .831 (Non-South Upbringing)

Years Higher Education x Experience = (Years Higher Education) (Experience)
-16.922 (Years Higher Education)
-.631 (Experience)

Non-Farm x Experience = (Non-Farm Upbringing) (Experience)
-1.046 (Non-Farm Upbringing)
- .627 (Experience)

Graduate Degree x Experience = (Graduate Degree) (Experience)
-17.023 (Graduate Degree)
-.028 (Experience)

Siblings x Education = (Siblings) (Education) - 10.788 (Siblings) - 4.111 (Education)

Non-South x Education = (Non-South Upbringing) (Education)
-10.718 (Non-South Upbringing)
-.552 (Education)

Father's Education x Non-South = (Father's Education) (Non-South Upbringing)
-.690 (Father's Education)
-7.468 (Non-South Upbringing)

Father Foreign x Education = (Father Foreign) (Education)
-11.359 (Father Foreign)
-.180 (Education)

Appendix D: The 1968-75 "PANEL STUDY OF INCOME DYNAMICS"

By Peter Mueser

The Panel Study of Income Dynamics (PSID) is a longitudinal survey conducted by the Survey Research Center (SRC) at the University of Michigan. The survey is unique in that it provides a great deal of information on several thousand American families over an eight-year period.

As its name implies, a primary focus of the survey is on income: its determinants and effects, as well as its sources and uses. The PSID asked detailed questions concerning individual and family income. Although SRC did not code responses in as much detail as I would have liked, the survey does provide more detailed information on income than any other survey available. The longitudinal nature of the survey permits analysis of the stability of income and its various components.

The PSID provides basic background variables, such as father's education and occupation, mother's education, region of upbringing, and number of siblings. It does not include a measure of parental income, nor did SRC determine whether the respondent came from a broken home.

The PSID also asked a series of questions every year that were designed to measure individual attitudes. Again, the longitudinal nature of the survey allows inferences concerning the stability of these measures and their causal importance.

In addition, measures of mental ability and achievement motivation were administered to respondents in the fifth year of the survey.

SRC contacted families for the first PSID interview in the spring of 1968. The original sample included about 2400 low income families whom the Census Bureau had interviewed as part of the Survey of Economic Opportunity, and another 3800 families chosen by SRC from a representative sample of dwellings in the United States.

SRC succeeded in interviewing 4802, or 76 percent, of these families in the first year. In later years of the survey, SRC made no attempt to find respondents who had not been interviewed in the previous year, so that the cumulative response rate necessarily declined in successive years. SRC obtained interviews with 68 percent of the original sample in the second year, 62 percent in the fifth year, and 57 percent in the eighth year.

The initial questionnaire included nearly 500 items. Interviewers administered them in respondents' homes. Most questions pertained to the household head (taken to be the primary male, if present), but interviews obtained some information on the wife and other family members. Interviewers spoke to the head, if possible, but other household members answered for him if he could not be interviewed.

The interviewing procedure and questionnaire remained substantially unchanged from 1968 to 1972. In subsequent years SRC shortened the questionnaire, primarily by excluding questions on attitudes. After 1972, SRC interviewed most repondents by telephone.

In each year of the survey, SRC tried to obtain interviews with all families containing a 1968 sample member. This meant that where the members of a family split up and formed new households (most commonly because a son or a daughter left home) all resulting families were interviewed. Despite sample attrition, the number of families in the survey therefore increased from 4802 in 1968 to 5725 in 1975, the most recent year of the survey for which we have data.[1]

The final sample is biased by its original construction (which oversampled low income households) and by differential nonresponse. Also, the procedure of interviewing the families of all individuals who were in the original sample assures that the final sample will include a disproportionately large number of newly formed families, compared to a newly-chosen random sample. SRC provides weights which attempt to correct for these biases. All analyses of the PSID have been performed on samples using SRC weights.[2]

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[1] For details concerning sampling, response rate, and weighting, see the PSID data tape codebook, A Panel Study of Income Dynamics: Study Design & Procedures Vol.I, SRC, ISR (1972).

Because the PSID is a clustered probability sample, and because of the necessary weighting, sampling variance may be greater than it would be in a random sample. Comparisons of regression estimates for random PSID subsamples suggest that the sampling error for a multiple regression may be between 1.2 and 1.8 times the standard error obtained on the assumption of random sampling. This ratio is lower for standard errors of bivariate regressions.[3]

In the following analyses, I report coefficients and differences which are 1.96 times their random sample standard errors as "statistically significant." If the actual standard errors are 1.5 times those I report, my test corresponds roughly to a two-tailed test with p = 0.2, or a one-tailed test with p = 0.1.

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[2] SRC corrected for the sample design bias by first weighting each household by the inverse of its probability of being included in either of the original samples. The weight was then multiplied by the inverse of the expected response rate for the household, based on its characteristics. Response rates in the first year were estimated using only geographic criteria, such as region and size of city. For later years, SRC used response rates based on family head's age, education, marital status, race, family income, and family income relative to needs. Finally, the weight for any family with a head or wife who was not in the original sample was multiplied by one-half.

[3] See Morgan, et al. Five Thousand American Families--Patterns of Economic Progress, Institute for Social Research, University of Michigan (1974) Vol.I, Appendix B.

1. PSID BASIC SAMPLE

The analyses that follow seek to compare the PSID to other samples. They therefore ignore variables unique to this survey, including the longitudinal features of the data. I used interviews from 1971 and 1972 to obtain information concerning the single year 1971. The basic sample was chosen from the sample of families who were in the panel in 1972.

Table 0 presents the number of cases lost due to the basic sample restrictions. I used the 1972 interview to determine sex, age and 1971 earnings. I eliminated students and military personnel on the basis of responses to 1971 questions, except for about 2 percent of all cases, where the head had changed between 1971 and 1972. For these, I used the 1972 responses for all restrictions.

Excluding military personnel has little impact because the original SRC sampling frame omitted all dwelling units on military bases.

SRC generally did not interview individuals residing in institutions. However, if an individual was interviewed as the head of a household in one year, he was interviewed in later years even if he had moved into an institution. It is not possible to exclude such individuals from the sample.

The PSID age restriction limits the sample to individuals who were 25-64 in 1971, the year for which earnings were obtained. Other appendices apply the age restriction to the survey year, so that individuals were actually 24-63 in the year earnings were received.

Naturally, all exclusion criteria are subject to response and coding errors. Several families are coded as having the same head as in the previous year, but report a different sex for that head, indicating that one of the reports is erroneous. Similarly, reports on the family head's age differ by as much as five years from one year to the next. Such errors affect relatively few cases (fewer than 0.5 percent for sex).

Our use of reports at one point in time to determine student status and military employment for any time during that year may also lead to some errors. A few individuals undoubtedly reported their status as non-students or non-military in the spring, yet were full-time students or in the military the following fall. However, this is not likely to be common for men over 25.

One possible source of non-comparability with most other samples is that SRC interviewed only heads of households, rather than a random sample of individuals. Since SRC did obtain some information on all individuals in the sample families, we may examine the effects of omitting individuals who were not heads of households.

Table NH-2a lists individual relationship to head as well as means and standard deviations of available variables for heads and non-heads. I chose this sample according to the same restrictions as the basic sample, except that I could not exclude military personnel.

Only 3.3 percent of the PSID men who fit the restrictions are not heads of households. 1.6 percent are sons of the head, while 0.4 percent are brothers, and 1.1 percent are other related individuals.

Table NH-2a shows that non-heads work only three quarters as many hours, and receive less than half as much income as do heads. They are also more likely to be nonwhite and disabled.

Despite these differences, they comprise such a small proportion of the sample that their effect on sample means and standard deviations is small. Restricting the sample to household heads increases hours worked by 0.025 standard deviations, and income by 0.021 standard deviations. The other variables exhibit smaller changes.

Performing these restrictions on Census survey data (see Table NH-2b) indicates similar, though slightly smaller differences between heads and non-heads. However, since non-heads comprise 6.7 percent of the Census sample, restricting the sample to heads of households increases Individual Income somewhat more, by about 2.9 percent or 0.037 standard deviations.

If the basic sample includes all individuals with income, rather than earnings, as does the OCG, the bias of omitting non-heads is greater. When the sample is defined this way, the number of individuals who are not heads in the PSID individual sample increases to 4.3 percent of the total, 2.1 percent

are sons. With these restrictions, non-heads work less than half as many hours as heads, and receive only two-fifths as much income. A question on source of income indicates that in the PSID, over 90 percent of those men 25-64 who had income but no earnings received only transfers. As before, comparisons using the Census indicate a larger proportion of non-heads, and therefore a slightly greater bias due to their omission.

In comparing the OCG and PSID basic samples, we are comparing all individuals who have income to heads of households with earnings. This corresponds to comparing columns 6 with 2. The OCG sample definitions should therefore yield a mean income 2.5 percent below the PSID sample of household heads according to comparisons using the PSID individual sample, or 5.8 percent below according to comparisons using the Census.

CONCLUSION

The PSID Basic Sample differs from the target sample due to (1) the possible inclusion of some individuals in institutions, (2) response and coding errors of variables used for restricting the sample, and (3) the restriction of the sample to heads of households.

The first two factors are not likely to be important. The third factor has a statistically significant but substantively small impact on the sample.

2. VARIABLES

Table 1 presents questions and codings for variables in the comparative analyses. All of the variables are designed to report information concerning the head of the household. In about 90 percent of the cases the head actually answered the questions, while in the other cases his wife generally answered for him. The reader should keep in mind, therefore, that for some cases, information on the "respondent" is actually second hand.

BACKGROUND VARIABLES

Race is determined by observation, and therefore applies to whoever actually talked to the interviewer. I have assumed that whoever answered questions was the same race as the head.

SRC grouped data on Father's Education I have coded their measure into years of academic schooling, assigning to each category the half year nearest its average, according to Census data. I coded the top category, which indicates an advanced degree, as 18 in the absence of comparable Census data.[4]

Unlike other surveys, if the respondent did not know his father's education, SRC assigned codes on the basis of whether the respondent said his father was literate. SRC assigned cases to the 0-5 years category if the father was not literate and to the 6-8 years category if he was. As many as fifteen percent of the responses may have been coded on the basis of literacy.

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[4] See Appendix C for discussion of codes for education categories.

SRC coded Father's Occupation into nine broad categories, making it impossible to use detailed Duncan scores. I assigned an estimated average Duncan score to all but the ninth category. SRC's ninth category contains not only miscellaneous occupations (e.g., protective workers), but cases with inadequate response (not ascertained, and respondent does not know). For Father's Occupation, such cases comprise 7.8 percent of the sample. Since only 1.6 percent of respondent's own occupations fell into this category, I assumed that this miscellaneous category contained primarily cases where the respondent did not know, or did not report, his father's occupation. I treated all such responses as missing data.

The wording of questions on father's characteristics is somewhat different for the PSID than for most other surveys. Whereas other surveys ask respondents to report on father or other male head of the repondent's childhood household, the PSID questionnaire asks only about the father. Some respondents may therefore have reported their real father's characteristics even though they were not living with him. Others may have been unable to answer questions because they never knew their father. Since SRC did not ask whether the respondent had lived with his father, it is not possible to separate such individuals from other nonrespondents. Much of the later analysis will be performed on a sample of cases with complete data. It seems inappropriate to eliminate individuals from such a sample because they did not live with their father, and therefore could not answer questions about him. In order to identify people who may not have known their father, I created a variable to indicate all cases missing data on both Father's Education and Father's Occupation. In the OCG sample 57 percent of the respondents who lacked data on both Father's Education and Father's Occupation reported not having a male head of household at home when they were sixteen. In the Kalamazoo sample, this proportion was 71 percent.

TEST SCORE AND EDUCATION

Test Score is the respondent's score on a thirteen-item sentence completion test taken from the Lorge-Thorndike "intelligence" test. Test items required that respondents fill in a word in a phrase. A typical item is: "It is better that ten guilty persons ________, than that one innocent suffer," for which respondents must choose "escape" (rather than "suffer," "capture," "starve," or "repent"). The proportion of correct responses ranged from about a third, for the most difficult question, to better than 95 percent for the easiest.

A pilot study found that the sentence completion test correlated 0.2 to 0.6 with other ability tests, and 0.5 to 0.6 with education.[5]

For all PSID men aged 25-64, the KR-20 reliability of the test is 0.652.[6]

Since the test was administered to whoever talked to the interviewer, I have coded all cases where this person was not the head as missing data.

SRC scored the test as the number of correct answers, disregarding the fact that as many as five percent of the respondents refused to answer some of the questions. It is unclear what the proper scoring procedure would be, since we do not know whether an individual refused to answer because he did not know the answer, or for other reasons. However, if an individual refused to answer all questions, he got a zero by the SRC scoring procedure. Since 0.6 percent of the sample scored zero on the test, as compared with less than 0.05

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[5] The results of the pilot study are reported in Veroff, J., McClelland, L., and Marquis, K. "Measuring Intelligence and Achievement Motivation in Surveys" Survey Research Center, University of Michigan, October 1971.

[6] Christopher Jencks, unpublished memorandum dated June 25, 1973.

percent scoring 1, I assumed all individuals with scores of zero were refusers, and treated their test scores as missing.

The following analyses often assume that ability, as measured by this test, affects Education and Occupation. The test, however, was administered in 1972, after respondents had completed their education and obtained jobs. To the extent that these factors affect Test Score, such scores overestimate the causal importance of initial ability.

SRC reports Education in the same categories as Father's Education. I assigned the same values to categories. The question used to determine Vocational Training does not indicate whether on-the-job training is included in this measure. The PSID measure may therefore differ from that in most other surveys, where on-the-job training is explicitly excluded.

EMPLOYMENT VARIABLES

Job Tenure and Occupation usually came from the 1971 interview. In the few cases where the family head had changed in 1971, I used the 1972 interview.

SRC coded Occupation in the same nine broad categories as Father's Occupation, and I assigned the same Duncan scores.

In contrast to Father's Occupation, however, the miscellaneous category for Occupation appears to contain primarily protective workers.[7]

I therefore assigned this category an estimated Duncan score for protective workers.

Weeks Employed in 1971 is the sum of the number of weeks the respondent said he worked on his main job and the number of weeks vacation he took. If the respondent worked on a second job, time employed on this second job is not included. The data tape did not indicate whether or not the second job was concurrent with the main job. Number of Weeks lost due to illness are not included as weeks worked, since it was not possible to determine whether the individual was paid during his illness.

INCOME VARIABLES

In order to obtain comparability with the Census, Annual Earnings should include all income from wages and salaries or self-employment. The SRC tape provided wage and salary income, but did not give self-employment income for 1971. Instead, SRC divided earnings from self-employment into labor income and asset income on the basis of the number of hours worked. It recorded asset income only in categorized form, so it is not possible to estimate self-employment earnings by adding the asset and labor components. I therefore used hours worked and labor income to estimate earnings for the ten percent of the sample who received self-employment income. My estimation procedure yielded estimates of earnings in excess of total taxable income for about a third of these respondents. For these cases, I set earnings equal to taxable income.

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[7] Protective workers comprise nearly 2 percent of the male labor force aged 25-64 in 1970 ("Earnings by Occupation and Education" 1970 Census of the Population PC(2)-8B). It therefore seems reasonable that the 1.6 percent classified as miscellaneous by SRC are almost all protective workers.

SRC routinely assigned incomes to the small number of respondents who did not report them. I have treated all these assigned values as missing data.

SRC constructed Family Income for 1971 to include taxable and transfer income of all those in the family unit. I treated assigned values as missing when I calculated the basic sample statistics. However, in regressions performed on the complete-data sample, I used SRC's assignments in order to avoid further reduction in sample size.

3. UNIVARIATE DISTRIBUTIONS

RESPONDENT WHITE

Although the proportion of blacks is very similar for the PSID, Census and OCG, the proportion of whites and of "others" in the PSID differs from the other surveys. 3.5 percent of PSID cases are classified as neither Black nor White, as compared with 1.2 and 1.1 percent for the Census and CPS. The difference appears to be due to the fact that I classified Spanish Americans as "Other" rather than as whites in the PSID.

FATHER'S EDUCATION

The PSID has fewer men with poorly educated fathers than does the OCG. Only 10.3 percent of respondents in the PSID report that their father had completed five grades or less of school, whereas in the OCG 19.9 percent report four grades or less. 60 percent of the PSID sample report Father's Education as six to eight grades, compared to 49 percent reporting five to eight in the OCG. The bulge in the PSID six to eight grade category may be largely because SRC used this category for cases in which the respondent did not know his father's education but thought he was literate. The sample mean is 8.6 years for the PSID vs 7.7 for the OCG. Most of this difference is due to the secular trend in education. If we use Tables 2C to compare matching cohorts for the OCG and PSID, we find on the average the difference is less than 0.3 years. 8/

8/ Since PSID age refers to 1971, whereas OCG age refers to 1962 PSID respondents were born nine years after individuals of the same age in the OCG. Comparisons of similar cohorts using Tables 2C are therefore not quite accurate. I assume, however, that the one year discrepancy has a negligible effect.

FATHER'S OCCUPATION

The mean value for the Duncan score of Father's Occupation is also higher in the PSID than in the OCG, averaging 28.3 as compared with 26.9. For matching cohorts, however, the mean Father's Occupation is about a point higher for the OCG.

The standard deviation is smaller in the PSID, since it uses only eight broad occupational categories. This coding eliminates the variance in Duncan scores within the broad categories.

FATHER FOREIGN AND FATHER ABSENT

In the PSID, 16.3 percent of respondents report that their father is foreign born, somewhat fewer than the 18.9 percent in the PA. Questions for the two surveys are identically phrased. PSID Table 2C indicates that changes over time in Father Foreign probably cause this difference.

In the PSID, only 1.1 percent of the respondents are coded 1 on Father Absent, an indication of having missing data on both Father's Education and Father's Occupation. This is clearly not comparable with other surveys which asked whether the respondent was living with his father at age 16. Such a question indicates that over ten percent of respondents were not living with their fathers.

SIBLINGS

Respondents in the PSID report having an average of 3.8

siblings, significantly fewer than the 4.5 reported by OCG respondents. Two thirds of this difference is accounted for by changes over time. Comparing matched cohorts yields average numbers of siblings which differ by about 0.3. The mean number of siblings is also depressed in PSID because all respondents who reported eight or more siblings were coded as having 9. In OCG, the mean for such men is 9.85. This explains over half of the difference between matched OCG and PSID cohorts. The remaining difference is not significant.

NON-FARM UPBRINGING AND NON-SOUTH UPBRINGING

The PSID distribution of Non-Farm Upbringing differs markedly from that in the OCG (PSID 69.1 percent non-farm versus 78.9 percent in the OCG). Not only is the difference large, but it is in the opposite direction from what is expected, given the migration from farms. Two discrepancies in coding may explain this difference. First, PSID respondents are coded as being brought up on farms if they report growing up in any rural area, whereas OCG respondents must report living on a farm. Second, OCG respondents who were brought up on farms, moved off the farm but remained in the same community, were coded as non-farm (see Appendix B).

The PA, which was conducted in 1965, reports more respondents brought up on farms (38.7 percent) than does the PSID. Trends over time only account for about a third of the difference. The PA figure appears particularly high when we consider that it uses a strict definition of farm upbringing, which omits rural residents unless they were actually brought up on farms.

In the PSID, 31.8 percent of the sample were brought up in the South, as compared to 29.7 percent in the OCG. Restricting the sample to individuals with complete data, and matching PSID and OCG cohorts eliminates about a half of this difference.

EDUCATION

Respondents averaged 11.8 years of education in the PSID, as compared with 10.7 years in the OCG, and 11.4 in the 1970 Census.

If we compare the corresponding cohorts in the PSID and OCG, we find that the education averages only 0.3 years more in the PSID. Omission of nonheads of households from the PSID and the use of different income measures in the exclusion criteria explain an additional 0.15 years of the difference (see Table NH-2b). . The remaining difference is not statistically significant.

The one year difference in average birth years for the PSID and Census samples explains about 0.08 years of the 0.3-year difference in education means. In addition, the PSID's exclusion of non-heads of households increases mean education by about 0.03 years, reducing the difference to statistical nonsignificance.

The standard deviation in the PSID, 3.42, is 9 percent smaller than that in the OCG and 4 percent smaller than that in the Census. This difference is probably largely due to SRC's use of broader categories to code education. Different codings for graduate education may also be a factor. The Census codes graduate education as the number of years the individual spent in college or graduate school, grouping together all respondents with two or more years. (We coded these men at 19.) SRC codes individuals who obtained an advanced degree as completing 18 years of schooling, but codes those who attended graduate school without obtaining a degree as only 16.

AGE

The average age for the PSID, 42.5 years, is 0.6 years less than that in the OCG, and 0.8 years less than the Census. Since the PSID's omission of non-heads increases mean age by from 0.2 to 0.4 years, the difference is greater than this comparison implies. Given the similarity in coding of age, the discrepancy is most likely due to differences in samples. The standard deviation of age is about 11 years in the PSID and the Census, and slightly smaller in the OCG.

EXPERIENCE

PSID sample members have 23.6 years of experience as compared to 25.1 in the OCG and 24.6 in the Census. The difference reflects the fact that the PSID is both younger and better educated than the other two samples.

OCCUPATION

The Duncan score of respondent's occupation for the PSID sample averages 40.1, not significantly different from the average for the Census. The OCG mean, 37.5 is significantly lower, but changes in the occupational distribution between 1962 and 1970 more than account for the difference.9/

The PSID restriction to household heads should inflate mean occupational status in the PSID. Average occupational status in the PSID is therefore lower, relative to the Census and OCG, than would be expected.

The standard deviation of Occupation in the PSID is smaller than that of the OCG or Census (21.0 vs. 24.6 and 24.5). The difference is due to the use of nine broad occupational categories in the PSID. The standard deviation of Occupation in the PSID is very similar to that in the PA, which uses the same broad categories.

WEEKS EMPLOYED

Comparison with the PA indicates that fewer PSID respondents report working 52 weeks in the year (71.8 percent in the PA vs. 52.4 in the PSID). This difference may be due to a coding difference. PSID Weeks Employed reports weeks the respondent said he worked on his main job. Weeks he worked while on furlough from his normal job would not be

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9/ Comparison is between the 1962 OCG and the 1970 Current Population Survey, as reported by Hauser, R.M., and Featherman, D.L. "Trends in the Occupational Mobility of U.S. Men, 1962-1970" American Sociological Review Vol. 38, No.3 (June 1973): 302-310, Table 1.

included. Also, if the respondent changed jobs during the year, it is possible that weeks worked on one of his jobs would not be included.

ANNUAL EARNINGS

PSID Annual Earnings average $11,364, nearly twice the OCG mean and 19 percent higher than the 1970 Census mean. Both the OCG and 1970 Census means are close to those reported by the Current Population Survey (CPS) for their survey years (the OCG mean is 2 percent lower than the 1961 CPS mean, and the Census mean is 4 percent higher than the 1969 CPS mean). The PSID measure of earnings, however, is 13 percent higher than the 1971 CPS mean.

The exclusion of non-heads of households in the PSID may explain some of the difference between the PSID and the CPS. I have shown that this exclusion inflates the mean PSID personal income by about 2.5 percent. The CPS also differs from the PSID in that it includes students and military personnel while the PSID does not. These relatively poorly paid individuals lower the average CPS earnings. However, since our Census sample also excludes such individuals, these factors probably do not increase income by more than 4 percent.

Thus it appears that known differences in sample or measurement conventions cannot explain the entire difference between mean earnings in the PSID and other samples.

It is possible that the difference may be related to the PSID's high item response rate. Only 0.6 percent of the PSID respondents failed to report earnings, as compared with over 9 percent in the OCG, and over 13 percent in the 1970 Census. The OCG means were calculated using all cases and allocating values to cases missing income data. The allocation procedure used will compensate for some, but not all, patterns of non-response. If non-respondents in the OCG and Census had higher incomes than respondents whose reported characteristics were similar, the means for these samples could be depressed.

It is also possible that because of more detailed income questions and more careful interviewing techniques, the PSID obtained fuller more accurate reports of income from those who did respond. Since the same people were interviewed every year, respondents may have developed a feeling of obligation to the survey organization. SRC reports, for example, that some respondents began keeping income records so that they could answer the annual survey questions accurately.

Comparisons of PSID income to national accounting aggregates support this view. Minarik reports that the PSID's measures of family total labor and asset income was 88.5 percent of the aggregate in 1967, similar to the CPS, which generally gets between 88 and 90 percent of this kind of income. But for 1971, the PSID's income measure had risen to

96.4 percent of the national account estimates.[10]

This does not, of course, prove that the PSID figures are more accurate. They may just be inflated by attrition of low income families. The PSID had lost almost 40 percent of its original respondents by 1972. SRC weighted the sample to account for differential response rates, but this procedure may not have been adequate. Since the weights could consider only geographic characteristics of nonrespondents in the first year, if initial nonrespondents had lower earnings than others in the same geographic grouping, such nonresponse would bias mean earnings upwardly. In later years of the survey, SRC used personal characteristics to construct weights to compensate for nonresponse. Still, if nonrespondents had lower incomes than others with similar characteristics, this nonresponse could also bias earnings.

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[10] See Minarik, Joseph J. "New Evidence on the Poverty Count" (Brookings Institute, Spring 1975 - unpublished paper). By dealing with total family income, Minarik circumvented problems relating to the head of household restriction which we have discussed. However, it is possible that income from household members other than the head may be underreported, so that the PSID items used in his comparisons are less fully reported than are family head incomes used in most of our analyses.

The coefficient of variation for income and the standard deviation of the log transformation are both greater in the OCG ($V = 0.74$ and $s_{\ln} = 0.862$) than in the PSID ($v = 0.69$ and $s_{\ln} = 0.771$). The actual difference is larger than these figures indicate, since the OCG statistics are calculated from grouped data, which should bias these measures of dispersion downward.

Comparison of frequencies for the PSID and OCG indicates that the PSID has only two thirds as many respondents as OCG who have less than one fourth the mean income, and has more people grouped around the mean.

Some of the difference is due to discrepant sample restrictions and differing measures of income. Table NH-2b shows that excluding non-heads of households and those who have income but no earnings, together with focusing on earnings rather than personal income, depresses the coefficient of variation 6.0 percent (from 0.799 to 0.751).

The coefficient of variation for the Census ($V = 0.78$) is also larger than that in the PSID, but the standard deviation of the log transformation is very similar ($s_{\ln} = 0.757$). This implies that the Census has slightly more respondents with very high earnings relative to the mean, and slightly fewer with very low earnings relative to the mean. This difference is not readily observable in comparisons of frequencies, suggesting that extreme cases may be affecting these measures of comparison. The differences may be partly due to the fact that the Census has a higher minimum

code ($50 vs. $1). Differences in measures of dispersion of earnings may also result from the PSID's having a better measure of earnings than the other surveys. One cannot, however, rule out the possibility that the sample may be biased.

3.1 BASIC VS. COMPLETE-DATA SAMPLE

All my regression analyses will employ a subsample which omits most cases with missing data, but even this "complete-data sample" contains some respondents with missing data.

(1) I assigned the mean to those respondents missing data on both father's education and occupation on the grounds that they probably never lived with their father. I also assigned such men the mean on Father Foreign if their replies were inadequate. The variable Father Absent flags men with any assignments.

(2) I assigned an estimate to any case missing data on Weeks Worked or Total Family Income rather than omitting it from the sample.

The complete-data restrictions omit 25 percent of all respondents. Similar restrictions eliminate 19 percent of all OCG respondents who were asked their incomes.

The OCG variables for which we can identify nonrespondents generally have higher rates of nonresponse than do comparable PSID variables. However, the OCG has fewer variables, and CPS assigned values to some variables when responses were inadequate. Also, in the OCG, individuals who reported not having a father at home when they were 16 (14 percent of the basic sample) received assigned values on father's characteristics when they did not respond. The PSID failed to ask whether the father was present, and the proxy for Father Absent assigned values to less than 1 percent of the cases.

Table 2 presents means and standard deviations for the basic sample, the complete-data sample and the sample of those respondents with partial data. Those with partial data are generally disadvantaged on Education, Occupation and Annual Earnings in both the OCG and PSID. The differences for Education and Occupation are larger in the PSID than in the OCG, while that for Annual Earnings is smaller. In the PSID, partial-data respondents earn 7 percent less than do those with complete data, as compared with 21 percent less in the OCG. The PSID's partial-data sample has 50 percent more nonwhites in it than the complete-data sample, whereas in the OCG there is no difference.

Other differences in the characteristics of individuals omitted from the PSID complete-data sample are small and inconsistent.

There is some evidence that standard deviations for omitted cases are higher, indicating that they may tend to come from the extremes of distributions. The pattern is similar to that in the OCG.

Table 2A presents correlations for the basic sample and for the complete-data subsample. Although the exclusion of individuals with missing data causes correlations to change, no simple patterns emerge. Of all possible correlations, 49 percent are stronger in the complete-data sample, 45 percent are weaker, while the remainder are either unchanged (to three places), or change sign. Correlations which change sign do not change by more than 0.02.

Correlations involving background variables are slightly more likely to become weaker with the exclusion of nonrespondents, while those involving later variables are more likely to become stronger. All changes are so small, however, that they may be affected by the computing algorithm used.[11]

4. BIVARIATE RELATIONSHIPS

Tables 3A through 10 present bivariate statistics on the relationship between individual characteristics and measures of social and economic success. The tables show both analysis of variance and linear regression equations. Although I will compare statistics generated by these two procedures, one should keep in mind that they refer to slightly different samples. The analyses of variance cover all cases in the basic sample which have valid data on the dependent variable. Nonresponse on the independent variable is treated as a separate and valid category. The regressions, on the other hand, are only run on the 1774 individuals in the complete-data sample.

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[11] I used different SPSS computing procedures to calculate correlations for the two samples. The procedure used to calculate correlations on the basic sample is not quite accurate to three places.

EFFECTS OF FATHER'S EDUCATION

Table 3A presents the means and standard deviations of selected dependent variables by level of Father's Education, as well as eta^2s. Linear and quadratic regression equations appear in Table 3B.

The variable Father Absent is included in the regressions because it flags respondents who were assigned the mean for Father's Education. It assures that R^2 will not be downwardly biased because such individuals differ from the average. I will make no comparisons using Father Absent, since no other sample defines this variable in the same way.

The effect of Father's Education on the PSID Test Score is somewhat weaker than that in the Talent Survey after we correct for differences in test variances. This is not surprising, since the reliability of the Talent test may be as high as 0.90, as compared with a reliability of 0.65 for the PSID test.

Although eta^2 for the Veterans' survey AFQT is smaller than that in the PSID (0.051 vs. 0.061), this is largely due to the smaller standard deviation of Father's Education in the Veterans' survey. If we standardize test scores and compare means by categories of Father's Education, effects in the surveys appear similar.

Father's Education explains less variance in Education, Occupation and Earnings in the PSID than it does in the OCG.

This difference may be partly due to the SRC coding procedure which assigns 6-8 years of school to 60 percent of all cases. This should lower the standardized regression coefficient, eta^2 and R^2. However, if we group PSID and OCG categories of Father's Education so that they correspond exactly we find that differences in the category means of Education, Occupation and Ln Earnings are generally larger in the OCG. This implies that the basic relationship between Father's Education and these variables is stronger in the OCG than the PSID.

The nonlinear effects of Father's Education also differ for the two samples. The coefficient of Father's $Education^2$ is consistently negative, though generally not significant, in the PSID, implying decreasing returns for those whose fathers have more education. The coefficient is consistently positive in the OCG. It seems unlikely that this is a result of SRC's practice of assigning values to respondents who did not know their father's education on a basis of whether they thought he was literate. SRC's PA survey, which uses the same coding procedure, has a positive coefficient for Father's $Education^2$ in most comparable bivariate regressions.

Patterns of heteroscedasticity with respect to Father's Education are similar to those in the OCG, although the PSID's smaller sample size makes them less consistent.

The regression of Family Income on Father's Education in the PSID is very similar to that predicting Annual Earnings.. The percentage of variance explained is lower, however, since the added variance in Family Income is not well explained. The PA survey yields similar results.

EFFECTS OF FATHER'S OCCUPATION

Despite the coding of Father's Occupation into broad rather than detailed categories, Tables 4A and 4B indicate that its effect on subsequent variables is much like that in other samples, though the effects are consistently smaller in the PSID.

Father's Occupation explains 13.2 percent of the variance in the Talent Test in the quadratic regression but only 6.1 percent in the PSID. If we standardize variances the two tests, however, the linear coefficients are not significantly different, implying that the PSID's depressed R^2 is due to its smaller standard deviation for Father's Occupation.

For Years of Education, the eta^2 is 0.145 for the PSID, vs. 0.173 for the OCG. The unstandardized coefficient of Father's Occupation predicting respondent's Education is not significantly different in the samples, however.

The eta^{2}s for respondent's Occupation and Earnings are also much smaller in the PSID than the OCG. In these cases the unstandardized coefficients are also significantly smaller. SRC used the same broad categories to code Occupation as Father's Occupation, and we would expect this grouping in the dependent variable to depress the unstandardized coefficient. There is no obvious explanation for the discrepancy in the coefficient for Ln Earnings (Income) (0.0074 for PSID vs 0.0101 for OCG). Sample differences, differences in measures of income, or changes over time may all be factors.

Table 4B shows that in the PSID the coefficient for Father's Occupation^2 is generally significant and negative in the prediction of Test Score, Years of Education, Occupation and the various forms of earnings. This reproduces the findings of Talent (for Test Score) and the OCG (for other outcomes).

Patterns of heteroscedasticity in Table 4A generally correspond to those in Talent and the OCG, although the broad categories used for Father's Occupation in the PSID makes comparisons with the OCG difficult. In the PSID, for example, those whose fathers were self-employed businessmen (coded 48 on Father's Occupation) exhibit the greatest dispersion in Earnings. In the OCG, where such individuals are not coded into a single category, respondents whose fathers had Duncan Scores over 90 exhibit the greatest dispersion.

EFFECTS OF FAMILY SIZE

Tables 5A and 5B show the effects of Siblings. Although the PSID Test Score is less predictable than the Talent composite (as indicated by eta^2), the linear coefficients are not significantly different once we standardize the tests.

Both the eta^2s and linear coefficients of the effects of Siblings on Education are very close for the PSID and OCG survey.

Siblings predicts Occupation less well in the PSID than in the OCG ($eta^2 = 0.050$ vs. 0.074), but unstandardized coefficients are not significantly different.

The relationship between family size and Earnings is essentially similar in PSID and OCG. The difference between the linear coefficients in the regression predicting Ln Earnings is not statistically significant.

The nonlinear effect of family size causes $Siblings^2$ to have a positive coefficient in both the PSID and the OCG.

The patterns of heteroscedasticity are also generally similar to those found in the OCG, although they are less

EFFECTS OF RACE

Table 6 shows means and standard deviations for whites, blacks, and others (primarily Spanish Americans).

Race explains 6.9 percent of the variance in the PSID test, as compared with 7.4 percent for the Talent test and 3.7 percent for the Veterans' survey AFQT. Both the Talent and Veterans' surveys have small proportions of nonwhites, which lowers the explanatory power of race. The actual difference on Test Score between racial groups is greater in the Talent than the PSID, but somewhat smaller for Veterans'.

Differences between blacks and whites on Education, Occupation and Earnings are smaller in the PSID than the OCG, suggesting

an improvement in the relative position of blacks between 1961 and 1971. The black-white differences in income do not differ significantly from those in the 1970 Census.

As I have noted, the "other" category for the PSID is not comparable to the corresponding category in either the OCG or the Census.

EFFECTS OF AGE AND YEAR OF BIRTH

Tables 7A and 7B show measures of social and economic success by Age. For Education, the effect of "age" is actually an effect of year of birth, since individuals over 25 do not obtain much additional education. For other measures, the cross-sectional data in Table 7A and 7B do not allow us to distinguish between the effects of age and the effects of year of birth.

The PSID Test Score is lower for men over 55, but does not differ by age for younger men. Since the test was administered at the time of the survey, effects of age and year of birth are confounded. The Kalamazoo respondents took their test when they were in grade school. The negative impact of age on these 30-60 year olds is nearly twice that in the PSID (transforming test scores to have a standard deviation of unity produces coefficients of Test Score on Age of -0.027 in Kalamazoo vs. -0.011 in the PSID). The effect of age in the Kalamazoo sample is due to year of birth only, while the effect in the PSID is due to both year of birth and aging. If tests and samples are comparable, the stronger negative effect in Kalamazoo suggests that, up to age 55, aging has a positive impact on cognitive ability.

Year of birth explains 5 percent of the variance in education in both the PSID and the 1970 Census and 6.7 percent in the OCG. Comparison of mean education for different age groups indicates that the underlying relationship is very similar for the three surveys. However, the linear relationship is stronger in the OCG (OCG coefficient -0.084 vs. PSID coefficient -0.065). This difference is due to a slowing in the trend towards more education. Substituting into the OCG regression of Education on Age and Age^2 to account for the later date of the PSID yields an estimate of the effect which agrees closely with the PSID's.

The negative relationship between year of birth and Occupation is stronger in the PSID than in the OCG (coefficient -0.201 vs. -0.103). The difference is not quite statistically significant.

Age explains more variance in PSID Earnings than it does in Census Earnings or OCG Income, (eta^2 for Ln Earnings = 0.064 vs. 0.022 and 0.019). The shapes of the curves formed by plotting mean Ln Earnings against age are very similar for the three surveys. The only difference is that the two oldest age groups in the PSID experience a more precipitous decline in Ln Earnings than they do in the other surveys. Older men in the OCG experience the smallest decline in Ln Earnings, probably because OCG includes transfer income which they are more likely to receive.

For the three surveys, the standard deviations of both Education and Ln Earnings increase with age, but the patterns are stronger in the PSID.

EFFECTS OF TEST SCORE

Tables 8A and 8B present the effects of PSID's 13-question sentence completion test score.

An extra point on the PSID test is associated with 0.8 years more Education, a 3.9 advantage on the Duncan scale, $1334 extra Earnings, and $1413 additional Family Income.

The relationship of Test Score with Years of Education is essentially linear. The coefficient for Test Score^2 is not statistically significant, and increases R^2 by less than 0.001.

The coefficient for the squared term of the Test Score is positive and significant in the regression predicting Occupation. The squared term raises R^2 from 0.128 to 0.140. Those with test scores of 10 or more have greater variation in Occupation.

For Annual Earnings and Family Income, Test Score^2 is significant but increases R^2 only minimally. The squared term is not significant in the equations predicting Earnings$^{1/3}$ and Ln Earnings. The standard deviations of Annual Earnings and Family Income increase steadily with higher scores. Ln Earnings, however, shows no such pattern of heteroscedasticity. In fact, those with the lowest scores have much greater variation in Ln Earnings than others. This may be due to fact that those who refused to answer some, but not all, of the questions appear among the low scorers.

Since the PSID test is unique to the survey, strict comparisons with other surveys are not possible. Nevertheless, basic results are similar to those obtained with the NORC Veterans AFQT, the Talent survey academic composite, and the Kalamazoo "IQ" test. Table 8C presents linear coefficients standardized by Test Score for PSID, Talent, Veterans and Kalamazoo surveys.

A one-standard deviation increase in Test Score is associated with 1.575 extra years of education for PSID 25-64 year old men, but only 1.054 extra years for those 25-34. The return for a standard deviation increase on the Talent, Veterans and Kalamazoo tests range from 1.251 to 1.572. For comparable age groups, these tests are more strongly related to education than the PSID test. However, comparison of similar cohorts implies that the relationships of Test Score to Education is not smaller in the PSID (the sample of PSID respondents born 1927-1936 have a coefficient of 1.472, as compared with 1.215 and 1.521 for veterans born 1930-1932 and 1930-1934).

Test Scores are less strongly related to Occupation in the PSID than in other surveys, probably due to the PSID coding of Occupation into broad categories.

The association between Earnings and Test Score is generally greater in the PSID. This may be so because respondents took the test in the year of the survey. Veterans took tests at least three years prior to the survey, while Kalamazoo men took tests 20 to 50 years before the survey (while they were in sixth grade). Also, comparison of age groups within the PSID indicates that the lower coefficient for Veterans may partly reflect the fact that the PSID includes older men, whose earnings are more predictable.

The standard deviation of Annual Earnings increases with Test Score in all the surveys. Other patterns of heteroscedasticity, however, are not consistent across surveys.

EFFECTS OF EDUCATION

Tables 9A and 9B show the effects of education on measures of success.

I included the PSID test among the dependent variables because it may be affected by education. As expected, the mean of the Test Score increases monotonically with education. The increase slows with higher levels of education.

The standard deviation of Test Score declines for those with more education, because of the PSID test's negatively skewed distribution and apparent ceiling effects. (The variance of the Test Score shows similar, though weaker, patterns in the earlier tables which stratify the sample by background characteristics.)

PSID occupational status increases with education, but differences in means in Table 9A are generally somewhat smaller than in the OCG. This is reflected in the PSID's linear coefficient of Years of Education in regression equation 1. Regression 4, which fits a nonlinear model, indicates, however, that the effect of education on occupational status is only weaker in the PSID for schooling up through high school. For higher education, the return is similar for the two surveys.

The grouping of PSID occupations should lower the proportion of variance explained by education. Yet education explains a larger proportion of Occupation variance in the PSID (eta^2 = 0.421 vs. 0.406 in the OCG). Assuming that the samples are roughly comparable, this implies that the grouping scheme used for the PSID occupation is more sensitive to education than would be a grouping based on only Duncan scores.

The standard deviation of Occupation within education categories, in contrast to the pattern in the OCG, is smaller for those with the most education. Apparently, the PSID Occupation grouping scheme is most sensitive to educational differences beyond high school.

PSID mean earnings for individuals with differing educations reveal a pattern similar to that in the OCG and Census, but differences between Educational levels are generally larger in the PSID relative to the PSID mean. An exception is the category of respondents with some college, who earn 14 percent more than high school graduates in the PSID, but 18-20 percent more in the OCG and Census.

The higher returns to education in the PSID may be due to the more detailed income questions used. If we take mean Census earnings by education, multiply by the ratio of mean 1971 CPS income to mean 1969 income to correct for increases in earnings, and compare these with mean PSID earnings stratified by education, we find some support for this hypothesis. Mean earnings for those with 0-11 years of school are less than 2 percent higher in the PSID, while high school graduates receive over 6 percent more earnings in the PSID.

The coefficients in the regression predicting Ln Earnings imply that the return for an additional year of elementary or secondary school is about 10.4 percent in the PSID vs. 8.2 percent in the Census. The returns for a year of higher education are about the same in the surveys (5.5 percent in the PSID vs. 5.6 percent in the Census), but those for graduating from college are higher in the PSID (23.1 percent vs. 11.1 percent). The OCG return for each year of schooling through high school is about the same as the PSID. The return for years of schooling beyond high school is smaller in OCG, however.

If the highly educated are more likely to have income from self-employment, and if SRC obtained fuller reports of such income than OCG or Census, we would expect a pattern of this kind.

In the PSID, education explains 20 to 24 percent of the variance in earnings, depending on how earnings are transformed (table 9B, regression 4). The analogous percentages range from 15 to 18 in the Census and 16 to 19 in the OCG. The standard deviation of the residual is also consistently smaller in the PSID than the OCG. Census residuals are similar to PSID.

The standard deviation of Ln Earnings decreases with increasing education up through high school in all three surveys. In the PSID, it then increases for those with 13-15 years of education, declines for college graduates, and increases for those who attend graduate school. While this general pattern is apparent in all three surveys, individuals with 16 or more years of schooling have more uniform earnings in the PSID than in the other surveys.

EFFECTS OF EDUCATION AND EXPERIENCE

Table 10 presents regressions which include education and experience as independent variables in regressions predicting Occupation and transformations of earnings.

Experience and Experience^2 have statistically insignificant effects on Occupation in the PSID once we control education. The same is true in the OCG. The coefficients are significant in the Census but Experience explains no additional variance in Occupation.

In regressions of Ln Earnings on Education, and Experience the linear effect of Experience is weaker in the PSID (coefficient -0.0017) than in the Census or OCG (coefficients 0.0059 and 0.0070). However, when we consider the quadratic form, the effect of Experience^2 is greater in the PSID (coefficient -0.0012 vs. -0.0007 and -0.0005). These differences cause the peak for earnings to occur at 23.7 years experience in the PSID, in contrast to 20.9 years in the Census and 32.0 years in the OCG. Once we control Experience and Experience^2, the coefficients of the education variables for the PSID are not significantly different from those in the Census. Difference between the PSID and OCG education coefficients remain, however.

Adding Experience and Experience^2 to the PSID regression of Ln Earnings on education increases R^2 0.050, to 0.249. In the OCG R^2 increases 0.016, to 0.185, and in the Census, R^2 increases 0.029, to 0.178. The standard deviation of the residual in the PSID is smaller than in the OCG, but slightly larger than the Census.

CONCLUSION

The most important discrepancies between bivariate relationships of the PSID and of the comparison samples, and their possible causes, can be briefly summarized in four points:

1. Father's Education and Father's Occupation are less potent predictors of subsequent variables in the PSID than in the OCG. Coding differences do not explain the smaller effects of the PSID Father's Education. Coding may, however, depress the effects of Father's Occupation.

2. Race is a less potent predictor of Education, Occupation and Earnings in the PSID than in the OCG, presumably reflecting gains by blacks relative to others between 1961 and 1971.

3. Age and Education predict earnings better in the PSID than in the Census or OCG, suggesting that the PSID earnings measure may differ from that in the other surveys. This appears reasonable in the light of the higher mean for PSID Earnings, as well as the more detailed set of questions SRC used to obtain reports on income. Test Score also predicts Earnings better in the PSID than in other surveys, but this may be due to the timing of the test.

4. The PSID test has a smaller effect on Occupation than do other tests.

5. In regressions controlling education, the peak in the experience-earnings profile occurs earlier in the PSID than in the other surveys.

Although known sample differences account for many of the observed discrepancies in bivariate relationships, others are not easily explained. It is possible that sample attrition and nonresponse have biased the PSID sample without greatly affecting univariate statistics. For example, if individuals whose educatonal level and earnings were very discrepant felt uncomfortable discussing their finances, and were hence more likely to drop out of the survey, the correlation between education and earnings might be upwardly biased without greatly affecting univariate statistics.

5. MULTIVARIATE RELATIONSHIPS

DETERMINANTS OF TEST SCORE

The Talent Academic Composite and the Armed Forces Qualification Test differ in both concept and construction from the test used in the PSID. In order to compare the samples, I corrected only for the differences in the variances of the tests, multiplying raw coefficients by the ratio of standard deviations.

Such correction indicates that effects are more similar than might be expected. In regression 2 of Table 12, after correction, the coefficients for Respondent White and Father's Education are not significantly different for the three surveys. The coefficient for Siblings, however, is nearly 50 percent greater in Talent than the PSID. (The Veterans survey has no such measure.)

It is difficult to compare the importance of Father's Occupation in the surveys, since White Collar Father is included in the PSID but not the others. Nevertheless, the total effect of the two father's occupation variables in the PSID is less than that of the single measure in the Talent and Veterans surveys. These differences between the coefficients remain basically unchanged in other multivariate regressions predicting Test Score.

17.6 percent of the variance in the PSID test score is explained by linear background factors, as compared with 20.4 percent in Talent, and 14.0 in Veterans.

Since the PSID test followed completion of schooling, equation 6 enters Education as an independent variable. The effect is strong and significant, although the effect of each year of Education (after standardizing tests) is smaller than that in the Veterans. The proportion of variance explained in the PSID is also smaller than the Veterans sample ($R^2 = 0.283$ vs. 0.369).

DETERMINANTS OF EDUCATION

The regressions of Years of Education on background characteristics, regressions 2 and 3 of Table 13A, yield coefficients very similar to those in the OCG. Differences between unstandardized coefficients for the two samples are not generally statistically significant.

The coefficient for Father's Occupaton is much lower in the PSID than in the OCG (0.0049 vs. 0.0237), while that for Father White Collar is greater (1.2681 vs. 0.9142). This discrepancy appears to be due to a low zero-order correlation between Father's Occupation and Years of Education, presumably resulting from the PSID's broad-category occupational coding scheme.

The difference in the coefficient for Age, as in the bivariate case, reflects a slowing in the increase of average educational attainment over time.

The amount of variance in Years of Education explained by background factors is greater in the OCG than in the PSID ($R^2 = 0.348$ vs. 0.306). However, the standard deviation of the residual is also larger in the OCG than in the PSID. This probably reflects the secular decline in variance of education between 1962 and 1971.

Interaction effects tested in regression 4 are generally similar for the PSID and the OCG. All six interaction terms tested in the OCG (Table 20) would enter with the same sign in the PSID (Table 20). Equations in PSID and OCG are not quite comparable, however, since the PSID equation includes Test Score.

The Talent survey should provide a good comparison for regressions 4 and 5, since Test Score enters an an independent variable. However, comparisons of all Talent education regressions with those in the PSID suggest that there are large differences in coefficients. The greatest differences are for nonwhites, who appear to have an advantage in the Talent survey, but a disadvantage in the PSID.

Less striking, but statistically significant differences also appear in the coefficients for Father's Education and Siblings, which have stronger effects in the PSID. Also, the combined effect of Father's Occupation and White Collar Father are smaller in the PSID than the effect of Father's Occupation in Talent. These differences are consistent in all reported regressions predicting education.

Surprisingly, the effect of Test Score in the PSID is very similar to that in the Talent survey, despite the PSID's lower zero-order correlation with Education. If we correct the Talent coefficient to account for the different variances of the two tests, we find that the corrected coefficient is not significantly different from that in the PSID.

Because the Talent survey is a sample of eleventh graders interviewed 11 years later, the distribution of Years of Education is truncated at the lower end. This causes the variance to be depressed and should tend to lower coefficients in the Talent regressions predicting Years of Education.

Other differences between the PSID and Talent may be due to the fact that Talent respondents attended school and college later than most PSID respondents. Table 13C, which presents PSID regression stratified by age, indicates, for example, that the advantage of being white is less for recent cohorts. However, the PSID sample is too small to allow us to determine whether changes over time completely account for the difference in the race coefficient for the PSID and Talent.

Although background and test scores explain a slightly larger proportion of the education variance in the PSID than in Talent, the amount of the unexplained variance is also larger in the PSID.

If we assume that the regression of Education on individual characteristics is linear and homoscedastic, it is possible to calculate the extent to which R^2 will be depressed by the omission of individuals at the extremes of the education distribution. In the PSID regression of Years of Education on family background characteristics (regression 2), R^2 is 0.28, but if we truncate Years of Education so that its variance is equal to that in the Talent survey, we expect R^2 to decline to 0.17. The corresponding regression in Talent has an R^2 of 0.18.

In the regression which controls Test Score as well as background factors, R^2 is 0.38 in both surveys. Here, although Talent's truncation of education should lower R^2, Talent's use of a more reliable test should raise it. Thus it is not surprising that R^2 ends up about the same.

Table 13B presents the regressions predicting education separately for whites and nonwhites. Differences imply that nonwhites have larger returns to Father's Occupation, and are less severely handicapped by coming from large families. However, living in a household headed by a female is a greater disadvantage for nonwhites. Secular improvements in the educational attainments of nonwhites are reflected in the stronger negative effect of age for this group. These results obtain whether or not the PSID test score is controlled.

Signs of multiplicative interactions tested on the full sample and reported in table 20 show these effects. They are not included in full-sample regressions because other multiplicative interactions increased R^2 more.

In the OCG regression of Education stratified by race, differences involving Father Absent, Siblings and Age are significant and in the same direction as differences in the PSID.

The educational attainment process has changed little over time, according to Table 13C, which presents regressions on the sample stratified by age. The only simple and consistent trend over time is the improvement in the relative position of nonwhites and those brought up on farms. Similar trends are apparent in the OCG.

Regressions run on the PSID sample stratified by Father's Occupation (Table 13D) indicates [illegible] significant differences in coefficients. Of these, three are also significant in the OCG. Father's Education is more important for sons of farmers than white collar sons, while being brought up outside the south is most important for blue collar sons. Year of birth is also more important for farmers' sons, indicating that the relative disadvantage of being raised on a farm has declined.

Differences in the Talent survey for individuals whose fathers had differing occupations fails to correspond to those observed in the PSID.

Interactions with Test Score are examined in Table 13E. The only statistically significant differences in coefficients across levels of Test Score are for Father's Education, which is less important for high scorers, and for White Collar Father, which is more important for high scores. Also, the effect of Test Score is greater for those with higher scores, reflecting a nonlinearity in its effect. Only this last finding is replicated in the Talent survey.

In conclusion, coefficients in the PSID regressions predicting education are basically very similar to comparable OCG regressions. The effects of the few multiplicative interactions which were tested in both surveys also agree as do most interactions implied by regressions on the stratified sample. However, there are substantial differences in R^2 and the standard deviation of the residual for the PSID and OCG.

Talent regressions of education do not agree so closely with those in the PSID. Accounting for the deletion of extreme cases on education in Talent helps to account for some differences, although others remain or become larger. Discrepancies between the PSID and Talent may be due to intercohort differences.

DETERMINANTS OF OCCUPATION

The PSID regression of Occupation on respondent's background characteristics (Table 14A) yields estimates of coefficients and standardized statistics which are generally smaller than those found in the OCG. This may be, in part, due to the grouped measure of Occupation used in the PSID.

To account for this, I multiplied the PSID coefficients in table 14a by 1.18, which is the ratio of the PSID standard deviation of Occupation to the OCG standard deviation.[12]

Even after this correction, several discrepancies are statistically significant. In regression 2, Father's Occupation has a greater effect in the OCG, whereas White Collar Father has a greater effect in the PSID. As in the regression predicting education, this difference is due to the depressed zero-order correlation of Father's Occupation with the dependent variable, most likely resulting from the PSID's broad-category coding scheme. Although grouping Father's Occupaton does not affect its unstandardized bivariate coefficient, it will depress the coefficient in a multiple regression.

Father's Education has a larger effect in the PSID. Each year of Father's Education is worth 1.40 points (corrected) on the Duncan scale, as opposed to 0.83 points in the

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[12] This correction assumes that the difference in standard deviations is due entirely to the grouping of PSID occupations and that the mean Duncan score assigned to each category is accurate. Furthermore, the sum of the residuals for the occupations in each group (in the regression predicting detailed occupation) must not be correlated with the mean assigned to the group.

This procedure yields the same coefficient as we would get if we corrected all the correlations and recalculated the regression coefficients.

OCG. This difference may also be due to the depressed correlation of Father's Occupation with Occupation.

The coefficient for Non-Farm Upbringing is much larger in the OCG (5.12 vs. 3.34). Table 14C indicates that this probably does not reflect over-time changes in the occupational attainment of farmers' sons.

The proportion of variance in Occupation explained by background factors alone is larger in the OCG than the PSID (R^2 = 0.244 for the OCG vs. 0.169 for the PSID). Correcting the OCG R^2 to account for the PSID's grouping of occupation does, however, appear to explain the difference (PSID corrected $R^2 = (1.18)^2(0.169) = 0.235$).

Regression 6 considers the effects of Education, as well as background, on Occupation. The coefficients of the education variables are very similar in the PSID and OCG, because, as we noted earlier, the PSID broad occupational categories have more education variance between them than would adjacent categories. The effect of schooling up through high school is slightly greater in the OCG, but the value of other schooling is the same. Because the variance of Occupation is smaller, education increases the R^2 for the PSID more, so that the total proportion of variance explained in the PSID and OCG is similar (0.450 and 0.449).

Although other coefficients in the regression change when we control education, most change similarly in the OCG. The coefficients for Respondent White and Siblings decrease more in the PSID, however.

If we were to add Experience to regression 6', the coefficient would be -0.004. This is significantly different from OCG, where the coefficient is 0.19 in equation 7.

Equation 7, which controls Test Score, and equation 7', which does not, add Job Tenure. The negative effect of experience increases in both regressions.

None of the multiplicative interaction terms tested is statistically significant in the PSID. It is possible, of course, that such terms actually capture interaction effects, but that the small sample prevents them from reaching statistical significance. Comparisons of the coefficients for interaction terms which were tested with those tested in the OCG indicate that this is unlikely, however. Of the 10 interactions tested in both the PSID and OCG (regression 7), only five had coefficients with the same sign in the two samples (see Table 20 for the PSID and OCG).

Table 14B presents regressions on the sample stratified by race. Test Score appears more important for whites, although the difference is small (t = 2.3).

For College Graduation, the difference is larger, indicating that nonwhites benefit more by graduating from college. The advantage is smaller if we consider the effect of four years of college. There is a similar pattern in the OCG.

Table 14C, which presents regressions of Occupation for different age categories, shows that schooling through high school is a consistently more important determinant of Occupation for younger men. Each year of elementary or secondary schooling is worth 2.56 points on the Duncan scale for the youngest group, but only 0.75 for the oldest. This pattern does not appear in the OCG.

Furthermore, significant differences in the OCG are not generally observable in the PSID.

Regressions of Occupation stratified by Father's Occupation (Table 14D) yield four significant differences in coefficients, three of which are replicated in the comparison samples. Years of Higher Education is more important and Test Score is less important for sons of farmers, and the Duncan score of the father's job matters more if the job is blue collar. Similar patterns are found in the OCG for Years of Higher Education and Father's Occupation, and in the Veterans survey for Test Score.

Table 14E presents regressions stratified by Test Score. Only three of 30 possible differences between subsamples are statistically significant. The largest difference is for Test Score (three times its standard error), indicating that the effects of the PSID test are non-linear. As noted above, this is due to the high mean on the test, which causes a ceiling effect. Comparable regressions for the Talent or Veterans surveys do not show a similar effect.

In summary, discrepancies between the PSID and OCG are to a large degree due to the broad occupational categories used by SRC for coding Occupation and Father's Occupation. This coding tends to depress effects of background characteristics but not of education. Of the few interactions which appear when the sample is stratified, most are also apparent in the OCG. This resemblance does not hold, however, for interactions involving Age.

DETERMINANTS OF LN EARNINGS

In predicting Ln Earnings, we focus on a model predicting percentage change in earnings. Coefficients for such a model are invariant across samples where income differs by a simple multiple--for example, due to inflation. Since differences in distributions of Earnings for the OCG and PSID are, in part, due to inflation, and because other over-time changes may work like inflation, I will compare coefficients for the regressions predicting Ln Earnings.

The regression of Ln Earnings on background characteristics and interactions for the PSID (Table 16A, Equation 2) yields coefficients which are similar to those obtained on the OCG. The coefficients for Respondent White is greater in the OCG, reflecting a higher zero-order correlation in the OCG. This is consistent with the improvement of the economic position of blacks between 1961 and 1971. The coefficient for Father White Collar is higher in the PSID, but since its zero order correlation with Ln Earnings is actually lower, this is probably due to the PSID's broad categories used to code Father's Occupation. Effects of non-south upbringing are less in the PSID.

Three interactions between background characteristics enter in equation 5. None of these interactions entered in the corresponding OCG regression.

Differences in the coefficients of interaction terms do not result primarily from the inclusion of Test Score in the PSID, since coefficients for the three interaction terms do not change appreciably when it is omitted. However, the presence of Test Score in the regression causes the coefficients for Respondent White, Father's Education, Siblings, Non-Farm Upbringing and Non-Southern Upbringing to decline between 18 and 35 percent.

Equations 6 and 6' present Ln Earnings regressed on education and background variables. As in the OCG, coefficients of background variables decline appreciably when education is controlled. The coefficient for Respondent White remains significantly different for the two samples. The value of higher education differs in the two samples, being somewhat smaller in the PSID.

Although raw coefficients for regressions 2-6 are very similar for the PSID and OCG, standardized statistics differ markedly. Ln Earnings regressed on background factors (regression 2) yields an R^2 of 0.117 in the PSID, as compared with 0.165 in the OCG. Adding Test Score (not available in the OCG) increases the PSID R^2 to 0.172. Interactions between background factors increase R^2 only minimally for both samples.

Regression 6' enters education, boosting R^2 to 0.238 in the PSID, similar to the 0.229 R^2 in the OCG. (If Vocational Training were omitted from the PSID regression R^2 would be slightly lower, 0.233.)

Experience and Experience^2 enter in regression 7'. R^2 increases to 0.285, appreciably larger than the OCG comparable R^2 which is 0.244. Although in both surveys, earnings increase with experience to a peak, and then decline, coefficients for the linear and squared experience terms differ significantly for the two surveys. This difference is reflected in the point of maximum earnings, which occurs at 23.4 years in the PSID, and 30.2 years in the OCG.

The standard deviation of the residual is consistently smaller in the PSID than it is in OCG comparable regressions. This is despite the grouping of OCG income at the bottom, which should decrease errors. In absolute terms, then, Ln Earnings is less-well predicted in the OCG.

Regression 8 and 8' enter statistically significant interactions among education, experience and background variables. Neither of the interaction terms which enter is significant in the OCG.

When tested individually, three interactions reach significance in the OCG (see OCG Table 20). Only one of these, a negative interaction between Years of Education and Experience, would approach significance (t = -1.8) if it were entered in the PSID (Table 20).

Ln Weeks Worked is entered in regressions 9 and 9'. In both equations, the coefficient is not significantly different from 1, meaning that weeks worked has a simple multiplicative influence on Annual Earnings. This means that once we control for personal characteristics, the number of weeks the respondent worked does not affect his wage rate.

Entering Ln Weeks Worked causes the coefficients for Respondent White, Father's Education, Father's Occupation, and White Collar Father to decline between 25 and 100 percent. Evidently, the direct effects of these background factors on earnings once education is controlled derive from their affecting the number of weeks an individual works. The coefficients for

Non-Farm Upbringing and Non-South Upbringing increase when we add Ln Weeks Worked. It appears, then, that respondents brought up on farms and in the South actually work as many or more weeks per year as other individuals, but they receive lower earnings because their wage rates are depressed.

The coefficients for the education variables decline slightly, or are unchanged when we enter Ln Weeks Worked, reflecting the only slightly greater job security among the better educated. The coefficient for the dummy Vocational Training, however, declines by 37 percent, showing that such training increases earnings partly by providing more continuous employment.

Similarly, the effect of Job Tenure is 48 percent smaller when we control for the number of weeks the respondent worked. This is hardly surprising, since respondents who had changed jobs would be more likely to have been unemployed in the previous year. That Job Tenure retains a large coefficient (standardized coefficient is still 0.104) indicates that those who have been employed longer also have higher wage rates.

Equation 10 regresses Ln Earnings on background, education and experience variables, and on the Duncan score of the respondent's current occupation. Ln Weeks worked is not controlled, as it was in Equation 9. Coefficients for background variables decline only slightly relative to those in Equation 8, but the coefficients for academic schooling, decline quice noticeably. It appears, then, that in addition to their impact through schooling, background factors affect earnings by affecting both Occupation and time working. Their effect through the latter is stronger, however. The effect of Vocational Training is similar. In contrast, the effect of academic schooling is more likely to be mediated by Occupation than by weeks worked. Effects of Experience, Experience^2, and Job Tenure decline very little when we control Occupation, reflecting the fact that Occupation is little affected by these factors.

Equation 11 enters both Ln Weeks Worked and Occupation. Although both variables have strong and statistically significant effects, the effect of Occupation is appreciably smaller than it is in the regression where it was entered alone, indicating that higher status jobs have higher earnings, in part, because they provide more steady employment.

These results are similar to those obtained with the PA survey (the OCG has no measure of weeks worked). Of the 12 variables in the PSID Equation 9' which are also in the PA, only Experience and Experience^2 have coefficients which are significantly different in the two surveys. The impact of adding Occupation to Equation 9 is very similar for the PSID and PA.

The PSID Equation 6' predicts Ln Earnings less well than the comparable PA regression ($R^2 = 0.238$ in the PSID vs. 0.303 in the PA). Adding Experience and Experience^2 increases R^2 slightly more in the PSID, narrowing this gap somewhat (adding experience terms to PSID Equation 6' increases R^2 to 0.285 and increases the PA R^2 to 0.321). However, adding Ln Weeks Worked raises the proportion of variance explained in the PSID above the PA ($R^2 = 0.533$ vs 0.461). Since unstandardized coefficients are very close for the two samples, the greater effect of the PSID Ln Weeks Worked is due to its larger standard deviation.

Table 16B shows separate earnings regressions for PSID whites and nonwhites. The only statistically significant differences between these regressions are for Years of Education and Siblings. An additional year of schooling up through high school raises white earnings by about 5.7 percent, whereas it raises nonwhite earnings by only 0.8 percent. This difference is only 2.3 times its standard error. In contrast, the apparent value of higher education is slightly greater for nonwhites than for whites but the nonwhite N is too low for this difference to approach statistical significance. Each additional sibling depresses nonwhite earnings by about 4.2 percent, but causes a 0.3 percent increase in white earnings.

While there are several statistically significant differences in separate white-nonwhite regressions in the OCG, none of these correspond to the significant differences in the PSID.

Comparison of coefficients in Table 16C provides a test of whether variables interact with age. A number of trends are apparent. The effect of schooling up to high school is progressively greater for younger cohorts, while four years of college tends to be more important for older cohorts (this latter trend is not completely consistent). Being raised in the South is less of a liability for younger men. In addition, Experience is positively related to earnings for younger men, but negatively related for older men, reflecting the nonlinearity of the experience-earnings relationship.

OCG regressions on the sample stratified by age reflect only the last two patterns.

Regressions on the PSID sample stratified by Father's Occupation (Table 16D) indicate three significant differences. One of these differences appears also in the OCG. In both surveys, those whose fathers have white collar jobs experience a greater penalty for additional siblings than do those whose fathers are farmers.

Table 16E stratifies the PSID by Test Score. Five coefficients differ significantly across subsamples. Among the more interpretable findings is that Vocational Training is much more important for those with the lowest scores (t = 2.0), and experience is less helpful for low scorers (t = 2.8). The coefficient for white collar father is greater for the lowest scoring group than the others (t = 3.4). This may be an artifact of the PSID occupational coding since the status of father's job appears to have a negative effect for this group.

In the Talent survey, Experience also causes declines in Ln Hourly Earnings for those in the lowest scoring category, but not for others. Other PSID differences are not replicated in Talent.

DETERMINANTS OF EARNINGS AND EARNINGS$^{1/3}$

The primary differences between the PSID and OCG earnings equations are reflected above in comparisons of regression predicting Ln Earnings. I will therefore limit my discussion of equations for Earnings and $\text{Earnings}^{1/3}$ to a brief comparison of interaction terms and measures of explained variance (R^2 and residual).

In the regression of Annual Earnings on background factors and interactions (regression 5, Table 15A), four interactions enter. Three of these enter with the same sign in the regression predicting Ln Earnings. As in the case of the regression of Ln Earnings, none of these interactions is significant in the comparable OCG regression.

Four interactions involving education and experience enter with positive coefficients in regression 8 of Table 15A, implying that certain combinations of advantages increase Earnings more than the linear model implies. None of these interactions enters in the regression of Ln Earnings, or in the comparable OCG regressions for Earnings.

Table 15B provides separate regressions for whites and nonwhites. The only significant difference is that each sibling decreases nonwhite earnings by $370, whereas it increases white earnings by $19 ($t = 3.0$). The corresponding OCG regression does not replicate this finding.

Equation 5 of Table 17 enters interactions of background factors in the regression of Earnings$^{1/3}$ on background factors. The three interactions in this regression also enter, with the same sign, in the regression predicting Ln Earnings.

In Equation 8, only one interaction among variables involving education and experience enters. This interaction term, Years of Education x Test Score, enters with a coefficient of the same sign in the regression predicting Earnings but does not enter in the regression predicting Ln Earnings. None of the interactions found in the PSID regressions of Earnings$^{1/3}$ enter in comparable OCG regressions.

R^2 is higher for Earnings$^{1/3}$ than for untransformed Earnings or Ln Earnings in the PSID, OCG, PA and Census. In the PSID, R^2s for Equations 2-8 of Earnings$^{1/3}$ are at least 12 percent larger than those for Earnings. Ln Earnings is also generally better predicted than is untransformed earnings in the samples, although differences are small.

DETERMINANTS OF FAMILY INCOME

Regressions of Total Family Income on respondent characteristics appear in Table 18A. The coefficients in these regressions are basically similar to those in the regressions predicting Annual Earnings (Table 15A). This is not surprising, since head's earnings account for 77 percent of all families' incomes.

Background and education variables have slightly larger coefficients in the Family Income regression than in the regression for head's earnings. This implies the head's characteristics affect not only his earnings, but his family's other income. For example, in the regression of Earnings on background characteristics (regression [illegible], Table 15A), whites receive a bonus of $2384, whereas in the comparable regression for Family Income, they receive an extra $2[illegible].

In contrast, interactions between background variables are less important in the regressions of Family Income. Both for the interactions of Father's Occupation x Father's Education and of Respondent White x Siblings, the effects are smaller in the regression of Family Income.

While the effect of experience on Family Income has the same nonlinear pattern as on Earnings, the eventual decline occurs later for Family Income. Family Income peaks at 29.7 years of experience, as compared to 23.4 years for Earnings. This difference presumably reflects the fact that families headed by older individuals are more likely to receive unearned asset income and earned transfer payments, and more often have several earners.

The PA survey has similar differences in background, education and experience coefficients for regressions predicting Earnings and Family Income.

In regressions on background variables and Test Score (Equations 2 and 4), the proportion of variance explained is about the same for Earnings and Family Income. In regressions which enter education as well, R^2 is 0.268 for Earnings vs. 0.247 for Total Family Income. Adding Experience and Years of Job Tenure to the regression increases R^2 to 0.311 for Family Income vs. 0.313 for Earnings. The standard deviation of the residual is consistently larger in the regressions predicting Family Income, reflecting the larger standard deviation of that measure.

Table O: Cases Omitted by Basic Sample Restrictions: 1972 PSID, Unweighted Sample

Restriction	Cases Omitted	Sample Size
All heads of households	0	5060
Male heads of households[1]	**1444**	**3616**
Male heads aged 25-64 in 197[1]	1036	2580
Male heads aged 25-64 and not in school[2]	26	2554
Male heads aged 25-64, not in school, and not in military[2]	40	2514
Male heads aged 25-64, not in school or military, with earnings in 1971[3]	148	2366

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[1] Sex, age and earnings restrictions are based on response to 1972 question. Age in 1971 is 1972 age minus 1.

[2] Exclusion of military personnel and students is based on the 1971 question if the interview is available (i.e., if family head is same in 1971 and 1972); otherwise it is based on the 1972 question.

[3] Of cases which would otherwise be in the sample, 5.89 (i.e. 148/2514) percent are zero or negative earners. For weighted cases, however, only 4.49 percent are zero or negative earners.

Table NH-2a: Means and Standard Deviations of Characteristics of Males Not in School, Aged 25-64 in 1971: Comparison of PSID Heads of Households to Non-Heads, Sample with Earnings and Sample with Income.

Relationship to Head

	Respondents with Earnings		Respondents with Income	
	Percent	N	Percent	N
Head	96.7	2432	95.7	2456
Son	1.6	41	2.1	54
Brother	.4	11	.6	15
Other Related	1.1	26	1.4	34
Unrelated	.2	6	.3	8

Characteristics of Heads and Non-Heads

	Non-Heads (1) Mean S.D. (N)	Heads of Households (2) Mean S.D. (N)	All Individuals (3) Mean S.D. (N)	Non-Heads (4) Mean S.D. (N)	Heads of Households (5) Mean S.D. (N)	All Individuals (6) Mean S.D. (N)
Respondent White	.748 .437 (84)	.880 .325 (2432)	.876 .330 (2516)	.733 .442 (112)	.879 326 (2456)	.873 .333 (2568)
Age in 1971	36.301 10.718 (84)	42.369 10.995 (2432)	42.167 11.038 (2516)	38.335 11.850 (112)	42.404 11.002 (2456)	42.227 11.069 (2568)
Hours Worked	1553.990 723.428 (67)	2214.546 699.573 (2432)	2196.721 708.215 (2499)	1104.596 933.838 (95)	2211.045 702.284 (2456)	2169.775 742.277 (2551)
Individual Income	5387.99 3320.25 (69)	10831.13 7219.94 (2432)	10681.21 7196.14 (2500)	4402.16 3291.98 (96)	10803.00 7235.43 (2456)	10562.20 7229.72 (2552)
Is Person Disabled?	.151 .358 (74)	.123 .328 (2404)	.124 .330 (2488)	.303 .460 (101)	.124 .330 (2434)	.131 .337 (2535)
Number of Respondents	84	2432	2516	112	2456	2568
Percentage of Total	3.3%	96.7%	100.0%	4.4%	95.6%	100.0%

Race and Age are coded exactly as in later analyses. See Table 1.

Hours Worked is the product of weeks worked in 1971 and hours worked per week. Values over 9997 are set to 9998.

Individual Income is the sum of all earned and unearned (including transfer) income. (This measure is different from Earnings, which is used in later analyses.)

Disability is determined by an affirmative answer to the question, "Is this individual disabled or require extra care."

Table NH-2b: Means and Standard Deviations of Characteristics of Males, Aged 25-64 in 1970: Comparisons of Census Heads of Households to Non-Heads, Sample with Earnings and Sample with Income.

	Respondents with Earnings			Respondents with Income		
	Non Heads	Heads of Households	All Individuals	Non Heads	Heads of Households	All Individuals
	Means S.D. N	Means S.D. N	Means S.D. N	Means S.D. N	Means S.D. N	Means S.D. N
Respondent White [1]	.7896	.8798	.8738	.7829	.8777	.8708
	.4077	.3252	.3321	.4123	.3276	.3355
	2210	30969	33179	2446	30909	33355
Age in 1970	36.691	43.152	42.721	38.067	43.540	43.139
	10.985	10.899	11.023	11.710	11.064	11.204
	2210	30969	33179	2446	30909	33355
Education	11.20	11.61	11.58	10.79	11.51	11.46
	3.66	3.57	3.58	3.97	3.61	3.64
	2210	30969	33179	2446	30909	33355
Earnings	5664	9751	9516	5674	9785	9512
	3780	7353	7244	3793	7315	7208
	2210	30969	33179	2124	29793	31917
Hours Worked [2]	1954	2191	2178	1963	2193	2180
	708	651	657	705	650	656
	1659	28254	29913	1602	27251	28853
Individual Income	5863	10168	9381	5291	9914	9575
	4146	7779	7667	4191	7759	7650
	2210	30969	33179	2444	30874	33318
Is Person Disabled? [3]	.119	.095	.096	.207	.116	.123
	.323	.293	.295	.405	.320	.328
	2210	30969	33179	2446	30909	33355
Number of Respondents	2210	30969	33179	2446	30909	33355
Percentage of Total	6.7%	93.3%	100.0%	7.3%	92.7%	100.0%

1. Spanish American, Puerto Rican, Mexican, Cuban, etc. counted as nonwhite to conform to PSID variable.
2. Estimate from product of hours worked last week (April 1970) times weeks worked last year (1969) - both bracketed variables.
3. Disability that limits work.

Table 1: Coding of Principal Questions, with Frequency of Response for Civilian Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School: PSID Basic Sample (N = 2366)

Variable	Question	Coding	Frequency
Race of Respondent	By observation (1972)		
	White	1	88.0
	Black	0	8.6
	Mexican, Puerto Rican	0	2.8
	Other	0	.7
			100.0
	Not ascertained (N = 0)	NA	
Father's Education	How much schooling did your father have? Could he read or write?		
	Don't know grade but could not read or write	3	.2
	0-5 grades	3	10.1
	6-8 grades, or don't know grade but could read or write	7.5	59.5
	9-11 grades	10	6.9
	12 grades	12	12.8
	12 grades and non-academic training	12	1.0
	College, no degree	14	3.9
	College degree	16	3.5
	College, advanced or professional degree	18	1.9
			100.0
	Not ascertained (N = 91 or 3.8)	NA	
Father's[A/] Occupation	What was your father's usual occupation when you were growing up?		

[A/] Duncan scores assigned to each category are averages as reported by Duncan in Reiss, Albert J., Occupations and Social Status, New York: Free Press, 1961. Where the SRC categories are less detailed than those provided by Duncan, I have used an average of the Duncan scores for the detailed occupations, weighted by the number of males aged 16 and over reported in them by the Census in 1970 ("Detailed Characteristics: United States Summary," 1970 Census of Population PC(1)-D1, table 221).

Table 1: Coding of Principal Questions in PSID, with Frequency of Response for Civilian Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School: PSID Basic Sample (N = 2366)

Variable	Question	Coding	Frequency
Father's Occupation (continued)	Coded in Duncan scores		
	Professional, technical and kindred workers	75	6.4
	Managers, officials and proprietors	58	4.6
	Self-employed businessmen	48	7.3
	Clerical and sales workers	47	4.8
	Craftsmen, foremen and kindred workers	31	22.5
	Operatives and kindred workers	18	16.5
	Farmers and farm managers	14	28.1
	Laborers and service workers	12	9.8
	Misc. (protective workers, don't know, not ascertained) (N = 184 or 7.7 percent of total)	NA	
	None (N = 5 or 0.2 percent of total)	NA	
			100.0
Father White Collar	What was your father's usual occupation when you were growing up?		
	Broad occupational category with assigned Duncan score of 47 or above	1	23.0
	Broad occupational category with assigned Duncan score of 31 or below	0	77.0
			100.0
	Misc. (protective workers, don't know, not ascertained); or no occupation (N = 190 or 8.0 percent of total)		
Father Foreign	Where did your father grow up?		
	In U.S	0	83.7
	Foreign country	1	16.3
			100.0

Table 1: Coding of Principal Questions in PSID, with Frequency of Response for Civilian Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School: PSID Basic Sample (N = 2366)

Variable	Question	Coding	Frequency
Father Foreign (continued)	Not ascertained (N = 32 or 1.4 percent of total)		
Father Absent	Constructed variable. Indicates cases which are missing both Father's Education (NA, Don't know) and Father's Occupation (Misc., NA and DK). Assumed to be a proxy for having no father living at home during upbringing.		
	Data available (father assumed present)	0	98.9
	No data (father assumed absent)	1	1.1
			100.0
Siblings	How many brothers and sisters did you have? (Includes half siblings, adopted children, but not foster children)		
	None	0	6.5
	One	1	16.0
	Two	2	16.0
	Three	3	15.2
	Four	4	12.0
	Five	5	8.4
	Six	6	6.7
	Seven	7	6.2
	Eight or more	9	13.0
			100.0
	Not ascertained (N = 8 or 0.3 percent of total)		
Non-Farm Upbringing	Did you (head) grow up on a farm, in a large city, small town, or what?		

Table 1: Coding of Principal Questions in PSID, with Frequency of Response for Civilian Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School: PSID Basic Sample (N = 2366)

Variable	Question	Coding	Frequency
Non-Farm Upbringing (continued)	Farm, rural area, country	0	30.9
	Small town, any size town, suburb	1	36.7
	Large city, any size city	1	29.8
	Other, several different places	1	2.6
			100.0
	Not ascertained, don't know (N = 22 or 0.9 percent of total)	NA	
Non-South Upbringing	In what state and country was that (where you (head) grew up)? Coded into region		
	Northeast	1	24.8
	North Central	1	29.4
	South[B]	0	31.8
	West	1	9.3
	Alaska, Hawaii	1	.2
	Foreign country	1	4.6
			100.0
	Not ascertained (N = 7 or (.3 percent of total)	NA	
Age in 1971	1972 age in years minus 1.		
		25-29	15.3
		30-34	13.5
		35-39	12.7

[B] South includes the following states: Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia.

Table 1: Coding of Principal Questions in PSID, with Frequency of Response for Civilian Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School: PSID Basic Sample (N = 2366)

Variable	Question	Coding	Frequency
Age in 1971 (continued)		40-44	16.7
		45-49	13.8
		50-54	11.1
		55-59	8.5
		60-64	8.4
			100.0
Test Score	One point scored for correct answer on each of 13 sentence completion questions (test given in 1972).		
	Actual Score	1	.0
		2	.5
		3	.4
		4	.8
		5	1.8
		6	2.3
		7	4.5
		8	9.8
		9	14.4
		10	23.2
		11	21.7
		12	14.7
		13	5.9
			100.0
	Score 0 or head did not speak to interviewer (N = 244 or 10.3 percent of total)	NA	
Years of Education	How many grades of schooling did you finish? (If 6 grades or less) Did you get any other training? Do you		

Table 1: Coding of Principal Questions in PSID, with Frequency of Response for Civilian Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School: PSID Basic Sample (N = 2366)

Variable	Question	Coding	Frequency
Years of Education (continued)	have any trouble reading? (If 7 grades or more) Did you have any other schooling? What other schooling did you have? Do you have a college degree? What degrees do you have?		
	0-5 grades, difficulty reading	3	1.6
	0-5 grades, no difficulty reading	3	2.5
	6-8 grades	7.5	14.9
	9-11 grades	10	16.8
	12 grades	12	21.0
	12 grades and non-academic training	12	10.0
	College, no degree	14	15.8
	College degree	16	11.0
	College, plus advanced or professional degree	18	6.4
			100.0
	Not ascertained (N = 22 or .9 percent of total)	NA	
Vocational Training	(If finished 6 grades of school or less) Did you get any other training? (If finished 7 grades of school or more) Did you get any other schooling?		
	No training outside of regular school	0	76.4
	Training outside regular school	1	23.6
			100.0
	Not ascertained (N = 31 or 1.3 percent of total)	NA	
Experience in Labor Force	Constructed variable. Taken to be 1971 Age - Years Education -7, unless Years of Education is less than 7, in which case Experience is 1971 Age -14.		

Table 1: Coding of Principal Questions in PSID, with Frequency of Response for Civilian Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School: PSID Basic Sample (N = 2366)

Variable	Question	Coding	Frequency
Job Tenure (continued)	Over 9-1/2 years to 19-1/2 years	14.50	21.0
	Over 19-1/2 years	29.00	15.7
	1972 replies:		
	Under 1 year	0	3.6
	Over 1 year to 19 months	.40	.2
	Over 19 months to 3-1/2 years	1.50	.3
	Over 3-1/2 years to 9-1/2 years	5.50	.4
	Over 9-1/2 years to 19-1/2 years	13.50	.2
	Over 19-1/2 years	28.00	.1
			100.0
	Not Ascertained (N = 16 or .7 percent of total)	NA	
Occupation[c]	(If employed) What is your main occupation? (If unemployed) What sort of work did you do on your last job? (If retired, etc.) What sort of work did you do when you worked? (1971 question if interview available; 1972 otherwise.)		
	Coded into Duncan scores.		
	Professional, technical and kindred workers	75	15.7
	Managers, officials and proprietors	58	13.8

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[c] Duncan scores assigned to each category are averages as reported by Duncan in Reiss, Albert J., Occupations and Social Status, New York: Free Press, 1961. Where the SRC categories are less detailed than those provided by Duncan, I have assigned an average of the Duncan scores for the occupations, weighting by the number of males 16 and over in them in 1970 ("Detailed Characteristics, United States Summary," 1970 Census of Population PC(1)-D1, table 221.) For the miscellaneous category, I assigned the value 29, an estimate for the average Duncan score for protective workers. Recalculations indicate that this value is incorrect. The actual average Duncan score for protective workers (weighted by the number of males aged 16 and over reported in the detailed occupations in 1970 by the Census) is closer to 31.

Table 1: Coding of Principal Questions in PSID, with Frequency of Response for Civilian Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School: PSID Basic Sample (N = 2366)

Variable	Question	Coding	Frequency
Experience in Labor Force (continued)	Experience in years	0	0
		1-5	4.0
		5.1-10	13.4
		10.1-15	13.1
		15.1-20	12.1
		20.1-25	13.7
		25.1-30	14.1
		30.1-35	10.7
		35.1-40	8.3
		40.1-45	6.8
		45.1-50	3.8
			100.0
	Missing on Years Education (N = 22 or .9 percent of total)	NA	
Job Tenure[D/]	How long have you had this job? Constructed from 1971 reply if available; 1972 reply otherwise.		
	1971 replies:		
	Under 1 year	.50	12.5
	Over 1 year to 19 months	1.40	5.4
	Over 19 months to 3-1/2 years	2.50	14.5
	Over 3-1/2 years to 9-1/2 years	6.50	26.2

[D/] It is unclear how Job Tenure should be coded for any individual who changed jobs during 1971. I have attempted to obtain the respondent's job tenure for the job on which he worked the most weeks in 1971. The 1971 report is the best measure of this. For the few individuals who changed jobs after their 1971 interview, but before the middle of the year, job tenure pertains to the wrong job. Respondents who reported having been on the same job more than 19.5 years are coded 29, an approximate average for that category as determined from the Parnes survey of men aged 45-59 in 1966.

Table 1: Coding of Principal Questions in PSID, with Frequency of Response for Civilian Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School: PSID Basic Sample (N = 2366)

Variable	Question	Coding	Frequency
Occupation (continued)	Self-employed businessmen	48	7.6
	Clerical and sales workers	47	10.7
	Craftsmen, foremen and kindred workers	31	21.7
	Operatives and kindred workers	18	16.7
	Farmers and farm managers	14	3.4
	Laborers and service workers	12	8.8
	Misc. (protective workers, don't know, not ascertained)	29	1.6
Weeks Employed[E]	Sum of weeks on "main" job and weeks vacation. (Weeks ill, weeks unemployed, etc., not included)		
	Actual Weeks	1-5	.8
		6-10	.6
		11-15	.7
		16-20	.6
		21-25	1.0
		26-30	1.7
		31-35	2.4
		36-40	3.5
		41-45	4.2

[E] Although the questions were worded in such a way that most people would not include vacation in weeks on the job, some apparently did, making this sum greater than 52. In such cases, Weeks Employed was set to 52.

Where either of its components is missing, Weeks Employed is considered missing data in calculations of statistics on the basic sample. However, in regressions which are performed on the complete-data sample, an estimate of Weeks Employed is obtained by dividing the measure of hours worked (which SRC assigned if unavailable) by 40. If the quotient is greater than 52, Weeks Employed is set to 52.

The frequencies reported here do not include such assignments.

Table 1: Coding of Principal Questions in PSID, with Frequency of Response for Civilian Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School: PSID Basic Sample (N = 2366)

Variable	Question	Coding	Frequency
Weeks Employed (continued)		46-50	14.3
		51	17.9
		52	52.4
			100.0
	Not Ascertained (N = 17 or .7 percent of total)	NA	
Annual Earnings for 1971F/	Constructed from responses on salary, hours worked, self-employment. Includes income from farming, wages, private business, trade or professional practice. Excludes income from dividends, interest, rent. (1972 question)		

F/ Annual Earnings is taken to equal head's labor income (V2498) if the head had no income from farming or private business (V2502 = 0 and V2503 = 0). If he had income from either of these sources, I attempted to reconstruct his earnings by doubling head's labor income and subtracting the number of hours he worked ((2 x V2498) - V2439). However, if the number of hours worked was greater than the head's labor income, labor income was taken as Annual Earnings.

This procedure was then checked, by constructing a measure of head's income from all sources except transfers. This measure is obtained by subtracting wife's labor income and wife's asset income from what SRC calls total taxable income (V2507 - V2500 - Recode of V2506). Since wife's asset income is grouped, it was recoded to dollars as follows:

0. no income recoded to 0
1. $1-499 recoded to 250
2. 500-999 recorded to 750
3. 1000-1999 recoded to 1500
4. 2000-2999 recoded to 2500
5. 3000-4999 recoded to 4000
6. 5000-7499 recoded to 6250
7. 7500-9999 recoded to 8750
8. 10,000 or more recoded to 15,000
9. NA recoded to 0

This measure of head's income from all sources other than transfers should be greater than or equal to Annual Earnings. Where this was not true, Annual Earnings was set equal to this income measure. In all cases where head's labor income from farming or business was coded as missing (V2502 = 9 or V2503 = 9), Annual Earnings was coded as missing.

Table 1: Coding of Principal Questions in PSID, with Frequency of Response for Civilian Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School: PSID Basic Sample (N = 2366)

Variable	Question	Coding	Frequency
Annual Earnings for 1971 (continued)	Coded in exact dollars, amounts over $99,999 truncated to 99,999.		
		1-999	1.9
		1000-1999	1.9
		2000-2999	1.9
		3000-3999	3.1
		4000-4999	4.9
		5000-5999	4.9
		6000-6999	5.8
		7000-7999	8.6
		8000-8999	7.7
		9000-9999	7.1
		10000-14999	31.0
		15000-19999	12.7
		20000-24999	3.7
		25000-99999	5.1
			100.000
	Not ascertained (N = 15 or .6 percent of total)		
Total Annual Family Income in 1972 (no data assigned)	Includes taxable income of all those in family unit, plus all transfer income (1972 question)		
	Income in exact dollars. Amounts over $99,999 truncated to 99,999.	1-999	.1
		1000-1999	.6
		2000-2999	1.6
		3000-3999	2.1
		4000-4999	2.5

Table 1: Coding of Principal Questions in PSID, with Frequency of Response for Civilian Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School: PSID Basic Sample (N = 2366)

Variable	Question	Coding	Frequency
Family Income in 1972 (no data assigned) (continued)		5000-5999	3.0
		6000-6999	3.3
		7000-7999	5.4
		8000-8999	5.9
		9000-9999	5.1
		10000-14999	30.6
		15000-19999	20.3
		20000-24999	10.4
		25000-99999	9.0
	Values where any assignment was made (N = 154 or 6.5 percent of total)	NA	
Family Income in 1971 (missing data assigned by SRC)	Includes taxable income of all in family unit, plus all transfer income (1972 question). 154 cases missing data have been assigned values by SRC on a basis of available information.		
	Income in exact dollars, amounts over $99,999 truncated to 99,999.	1-999	.1
		1000-1999	.5
		2000-2999	1.5
		3000-3999	2.0
		4000-4999	2.7
		5000-5999	3.0
		6000-6999	3.3
		7000-7999	5.3
		8000-8999	5.6
		9000-9999	5.0
		10000-14999	30.4

Table 1: Coding of Principal Questions in PSID, with Frequency of Response for Civilian Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School: PSID Basic Sample (N = 2366)

Variable	Question	Coding	Frequency
Family Income in 1971 (missing data assigned by SRC) (continued)		15000-19999	20.2
		20000-24999	11.0
		25000-99999	9.3
Employment Status	Are you (head) working now, unemployed, retired or what?		
	Working now or temporarily laid off	1	96.6
	Unemployed, looking for work	2	1.8
	Retired	3	1.6
Interview Respondent	Who was respondent (relation to head)?		
	Head of family	1	90.0
	Wife responding for self[g]	2	.4
	Wife for husband	3	9.4
	Someone other than wife or husband	7	.1
			100.0
	Not ascertained (N = 1)	NA	

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[g] Responses in this category must reflect an SRC coding error, since all heads are reported to be males.

Table 2: Means and Standard Deviations of Characteristics of Civilian Male Heads of Households Aged 25-64 in 1971, With Earnings and Not in School: Comparisons of PSID Sample With and Without Missing Data (Complete Data Sample N = 1774).

		Means			Standard Deviations		
	# of Respondents	Basic Sample	Respondents with Complete Data	Respondents with Partial Data	Basic Sample	Respondents with Complete Data	Respondents with Partial Data
Respondent White	2236	.880	.895	.827	.325	.307	.378
Father's Education	2275	8.591	8.580	8.639	3.240	3.185	3.413
Father's Occupation	2176	28.256	28.368	27.648	18.092	18.104	17.679
Father White Collar	2176	.231	.230	.234	.421	.419	.424
Father Foreign	2333	.163	.160	.175	.370	.367	.380
Father Absent (Proxy)	2366	.011	.008	.019	.102	.091	.135
Siblings	2357	3.844	3.869	3.760	2.724	2.707	2.778
Non-Farm Upbringing	2344	.691	.685	.710	.462	.465	.454
Non-South Upbringing	2359	.682	.698	.627	.466	.459	.484
Test Score	2122	9.916	9.958	9.635	1.977	1.954	2.112
Years of Education	2344	11.753	11.956	10.998	3.420	3.330	3.640
Vocational Training	2335	.236	.238	.227	.425	.426	.420
Age in 1971	2366	42.479	42.484	42.519	10.998	10.925	11.080
First Occupation	2146	29.518	29.677	28.896	20.627	20.732	20.267
Experience	2344	23.559	23.403	24.135	11.960	11.912	12.174
Job Tenure	2349	9.872	10.000	9.401	9.588	9.491	9.934
Union Member	2361	.308	.316	.276	.462	.465	.447
Occupation	2359	40.139	41.009	37.042	20.987	21.067	20.316
Ln Weeks Worked	2349	3.841	3.844	3.817	.347	.350	.363
Ln Weekly Earnings	2349	5.281	5.300	5.208	.643	.620	.690
Annual Earnings	2351	11,364	11,549	10,697	7,787	7,730	7,948
Earnings 1/3	2351	21.493	21.648	20.917	4.694	4.637	4.929
Ln Earnings	2351	9.118	9.144	9.023	.771	.753	.835
Family Income	2212	14,679	14,941	14,290	8,939	8,830	9,359

Table 2A: Correlations of Characteristics for Civilian, Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School: Comparisons of PSID Basic Sample to Complete Data Sample.

c = complete data sample

p = basic sample (all cases with data on each pair of variables)

Numbers correspond to variables in left margin

		1	2	3	4	5	6	7	8
1. Respondent White	C	1.000							
	P	1.000							
2. Father's Ed.	C	.101	1.000						
	P	.131	1.000						
3. Father's Occ.	C	.080	.461	1.000					
	P	.103	.466	1.000					
4. Father White Collar	C	.052	.396	.877	1.000				
	P	.064	.396	.878	1.000				
5. Father Foreign	C	-.027	-.083	.024	.002	1.000			
	P	-.037	-.090	.024	-.002	1.000			
6. Father Absent	C	-.076	-.000	.000	.000	-.000	1.000		
	P	-.084	*	*	*	.021	1.000		
7. Siblings	C	-.195	-.242	-.265	-.227	-.000	-.029	1.000	
	P	-.167	-.249	-.264	-.222	.021	-.024	1.000	
8. Non-Farm Upbringing	C	.047	.155	.398	.301	.146	.018	-.242	1.000
	P	.019	.164	.404	.305	.155	.029	-.254	1.000
9. Non-South Upbringing	C	.266	.085	.119	.092	.253	-.053	-.128	.238
	P	.260	.096	.136	.107	.270	-.034	-.118	.238
10. Test Score	C	.266	.239	.243	.217	.069	-.023	-.258	.195
	P	.261	.231	.234	.207	.044	-.006	-.237	.199
11. Years of Education	C	.205	.379	.369	.349	.062	-.055	-.337	.234
	P	.219	.408	.375	.351	.042	-.035	-.326	.237
12. Vocational Training	C	.029	-.040	.010	-.007	.017	-.005	.018	.024
	P	.044	-.042	.003	-.013	.017	-.013	.011	.026

Table 2A (continued: 2)

c = listwise sample
p = pairwise sample

		1	2	3	4	5	6	7	8
13. Age	C	.027	-.181	-.109	-.082	.145	-.021	.120	-.095
	P	.049	-.154	-.106	-.083	.149	-.038	.120	-.092
14. First Occup.	C	.131	.273	.297	.275	.059	-.021	-.210	.169
	P	.147	.282	.314	.283	.066	-.021	-.218	.185
15. Experience	C	-.020	-.262	-.196	-.168	.117	-.009	.198	-.145
	P	-.006	-.252	-.195	-.169	.129	-.023	.196	-.145
16. Job Tenure	C	.055	-.114	-.080	-.064	.100	-.040	.042	-.055
	P	.066	-.107	-.085	-.072	.091	-.055	.060	-.064
17. Union Member	C	-.051	-.173	-.111	-.115	.102	.012	.073	.041
	P	-.079	-.162	-.118	-.125	.073	.017	.053	.033
18. Occupation	C	.191	.282	.290	.275	.048	-.021	-.240	.197
	P	.211	.298	.287	.272	.052	-.024	-.213	.191
19. Ln Weeks Worked	C	.088	.067	.034	.052	-.007	.005	-.099	.012
	P	.080	.066	.041	.057	-.022	-.012	-.080	.010
20. Ln Weekly Earnings	C	.193	.175	.198	.180	.121	-.026	-.182	.229
	P	.178	.186	.186	.168	.094	-.016	-.162	.217
21. Annual Earnings	C	.148	.174	.185	.192	.107	-.024	-.189	.195
	P	.148	.207	.179	.184	.087	-.027	-.182	.192
22. Earnings 1/3	C	.195	.193	.202	.197	.105	-.023	-.214	.219
	P	.187	.216	.193	.188	.086	-.025	-.201	.219
23. Ln Earnings	C	.200	.175	.179	.172	.096	-.019	-.196	.195
	P	.184	.181	.171	.164	.074	-.019	-.182	.197
24. Family Income	C	.139	.165	.185	.198	.137	-.027	-.182	.206
	P	.135	.192	.174	.185	.125	-.028	-.175	.197

Table 2A (continued: 3)

		9	10	11	12
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8. Non-Farm Upbringing	C				
	P				
9. Non-South Upbringing	C	1.000			
	P	1.000			
10. Test Score	C	.209	1.000		
	P	.199	1.000		
11. Years of Education	C	.216	.473	1.000	
	P	.219	.473	1.000	
12. Vocational Training	C	.075	.025	-.111	1.000
	P	.071	.026	-.085	1.000

Table 2A (continued: 4)

		9	10	11	12	13	14	15	16
13. Age	C	-.004	-.118	-.215	-.044	1.000			
	P	.013	-.119	-.214	-.025	1.000			
14. First Occup.	C	.097	.307	.502	-.044	-.108	1.000		
	P	.125	.298	.501	-.042	-.099	1.000		
15. Experience	C	-.052	-.226	-.448	-.007	.968	-.232	1.000	
	P	-.039	-.231	-.448	.003	.965	-.227	1.000	
16. Job Tenure	C	.026	-.037	-.098	-.040	.432	-.041	.422	1.000
	P	.007	-.019	-.092	-.011	.430	-.043	.420	1.000
17. Union Member	C	.080	-.116	-.206	.123	.012	-.163	.069	.112
	P	.062	-.111	-.190	.115	.013	-.153	.066	.109
18. Occupation	C	.132	.358	.618	-.073	-.104	.498	-.259	-.052
	P	.149	.358	.605	-.062	-.079	.488	-.239	-.040
19. Ln Weeks Worked	C	.006	.130	.140	.036	-.120	.102	-.147	.119
	P	.004	.145	.138	.028	-.098	.087	-.147	.120
20. Ln Weekly Earnings	C	.204	.356	.459	.015	-.075	.322	-.185	.086
	P	.176	.360	.432	.017	-.035	.297	-.159	.093
21. Annual Earnings	C	.162	.337	.446	-.041	-.012	.336	-.127	.112
	P	.150	.345	.437	-.030	.008	.315	-.115	.119
22. Earnings 1/3	C	.183	.378	.489	-.003	-.082	.350	-.201	.124
	P	.168	.390	.479	.007	-.062	.323	-.188	.137
23. Ln Earnings	C	.171	.353	.443	.029	-.117	.312	-.221	.126
	P	.152	.369	.431	.029	-.082	.288	-.206	.139
24. Family Income	C	.163	.313	.432	-.022	.086	.326	-.033	.130
	P	.154	.328	.418	-.028	.096	.315	-.027	.126

Table 2A (continued: 5)

		17	18	19	20	21	22	23	24
13.									
14.									
15.									
16.									
17. Union Member	C	1.000							
	P	1.000							
18. Occupation	C	-.298	1.000						
	P	-.294	1.000						
19. Ln Weeks Worked	C	-.005	.153	1.000					
	P	-.031	.162	1.000					
20. Ln Weekly Earnings	C	.080	.409	.137	1.000				
	P	.075	.420	.166	1.000				
21. Annual Earnings	C	-.049	.412	.252	.800	1.000			
	P	-.060	.421	.253	.790	1.000			
22. Earnings 1/3	C	.025	.450	.444	.910	.911	1.000		
	P	.010	.461	.426	.903	.914	1.000		
23. Ln Earnings	C	.068	.408	.578	.888	.776	.956	1.000	
	P	.052	.430	.541	.885	.781	.961	1.000	
24. Family Income	C	-.054	.397	.172	.738	.899	.813	.688	1.000
	P	-.067	.408	.189	.733	.905	.820	.691	1.000

* The correlations between Father Absent and variables relating to father's education or occupation cannot be calculated, since Father Absent is constructed so as to be 1 when data is missing on these two characteristics, and 0 otherwise.

Source:
Pairwise correlations from (Three) pp. 24-33, except for correlation involving Years at Present Job (# 16), Ln Weeks Employed (# 19) and Ln Weekly Earnings (# 20) which are from "Tnree C", Feb. 12, pp. 4-6. All listwise sample correlations from "SEVEN F" Feb. 18, pp. 6-7.

Table 2B Means and Standard Deviations of Characteristics of Civilian, Male Heads of Households Aged 25-64 With Earnings and Not in School by Race: PSID Complete Data Sample (N = 1744)

	White		Nonwhite	
	Mean	S.D.	Mean	S.D.
Father's Education	8.691	3.152	7.639	3.319
Father's Occupation	28.865	17.977	24.146	18.658
Father White Collar	.237	.424	.167	.366
Father Foreign	.157	.364	.190	.391
Father Absent	.006	.077	.028	.166
Siblings	3.687	2.630	5.411	2.859
Non-Farm Upbringing	.693	.462	.622	.485
Non-South Upbringing	.739	.439	.342	.475
Test Score	10.136	1.780	8.442	2.605
Years of Education	12.190	3.172	9.963	3.932
Vocational Training	.242	.429	.203	.402
Age	42.584	10.933	41.634	10.844
Experience	23.321	11.902	24.097	12.001
Job Tenure	10.181	9.603	8.465	8.335
Occupation	42.390	20.879	29.264	18.933
Ln Weeks Worked	3.854	.319	3.754	.537
Ln Weekly Earnings	5.341	.605	4.952	.642
Annual Earnings	11940	7552	8221	7601
Earnings 1/3	21.958	4.514	19.009	4.836
Ln Earnings	9.196	.700	8.706	1.001
Family Income	15361	8679	11374	9300
N (unweighted)	1260		514	

Table 2C: Means and Standard Deviations of Characteristics of Civilian, Male Heads of Households Aged 25-64 in 1971, With Earnings and Not in School by Age: PSID Complete-Data Sample (N = 1774)

	Age 25-34		Age 35-44		Age 45-54		Age 55-64	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Respondent White	.884	.321	.889	.315	.918	.276	.390	.314
Father's Education	9.553	3.294	8.310	2.993	8.177	3.098	8.008	3.115
Father's Occupation	31.612	20.308	27.176	17.139	28.158	17.352	25.282	16.049
Father White Collar	.286	.449	.210	.407	.226	.418	.175	.378
Father Foreign	.075	.262	.179	.384	.219	.414	.184	.388
Father Absent	.015	.122	.004	.060	.004	.066	.012	.107
Siblings	3.632	2.693	3.567	2.689	4.093	2.704	4.487	2.648
Non-Farm Upbringing	.726	.446	.703	.458	.687	.464	.580	.494
Non-South Upbringing	.681	.467	.727	.446	.710	.454	.654	.476
Test Score	10.186	1.712	10.101	1.821	9.951	1.956	9.313	2.398
Years of Education	12.725	2.583	12.303	3.283	11.579	3.527	10.569	3.737
Vocational Training	.242	.429	.256	.437	.246	.431	.188	.391
Age	29.260	2.916	39.948	2.871	49.302	2.771	59.532	2.864
Experience	9.524	3.818	20.575	4.304	30.544	4.253	41.622	4.285
Job Tenure	4.605	4.280	9.402	8.514	13.631	10.418	14.872	11.137
Occupation	43.160	21.076	42.865	21.727	39.241	20.301	36.600	20.150
Ln Weeks Worked	3.872	.221	3.875	.293	3.844	.346	3.738	.554
Ln Weekly Earnings	5.275	.508	5.408	.539	5.378	.590	5.029	.855
Annual Earnings	10800.	5630.	12796.	7831.	12058.	7600.	9792.	10079.
Earnings$^{1/3}$	21.453	3.781	22.553	4.396	22.088	4.363	19.655	6.006
Ln Earnings	9.147	.582	9.282	.680	9.222	.642	8.767	1.097
Family Income	13002.	6190.	15947.	8641.	16714.	9050.	13759.	11520.
N (unweighted)	545		528		431		270	

Table 2D: Means and Standard Deviations of Characteristics of Civilian, Male Heads of Households Aged 25-64 in 1971 with Earnings and Not in School by Father's Occupation: PSID Complete Data Sample (N=1774)

	Father's Occupation					
	White Collar		Blue Collar		Farming	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
Respondent White	.926	.262	.901	.299	.857	.351
Father's Education	10.898	3.753	8.002	2.523	7.698	2.823
Father's Occupation	57.549	11.797	22.847	7.863	14.000	.000
Father White Collar	1.000	.000	.004	.029	.000	.000
Father Foreign	.162	.369	.196	.397	.094	.292
Father Absent	.000	.000	.017	.128	.000	.000
Siblings	2.745	2.322	3.812	2.603	4.925	2.799
Non-Farm Upbringing	.942	.235	.831	.375	.198	.399
Non-South Upbringing	.778	.416	.748	.434	.535	.499
Test Score	10.739	1.662	9.852	1.887	9.495	2.109
Years of Education	14.108	2.650	11.605	3.081	10.791	3.471
Vocational Training	.233	.423	.263	.441	.196	.397
Age	40.863	10.862	41.715	10.542	45.289	11.191
Experience	19.742	11.366	22.985	11.255	27.273	12.450
Job Tenure	8.919	8.978	9.613	9.214	11.637	10.207
Occupation	51.686	19.132	39.633	20.611	34.548	20.128
Ln Weeks Worked	3.877	.270	3.825	.388	3.851	.333
Ln Weekly Earnings	5.507	.582	5.297	.557	5.130	.706
Annual Earnings	14297	9099	11016	5965	10219	8773
Earnings$^{1/3}$	23.337	4.722	21.462	4.269	20.566	4.838
Ln Earnings	9.384	.660	9.122	.752	8.981	.778
Family Income	18186	10366	14300	7027	13396	9733
N (unweighted)	329		862		583	

Table 2E: Means and Standard Deviations of Characteristics of Civilian, Male Heads of Households Aged 25-64 in 1971 with Earnings and Not in School by Test Score: PSID Complete-Data Sample (N = 1774)

	Test Score					
	1-9		10-11		12-13	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
Respondent White	.812	.391	.935	.246	.942	.234
Father's Education	7.711	2.756	8.747	3.210	9.602	3.354
Father's Occupation	23.332	14.149	28.735	18.396	35.543	20.418
Father White Collar	.121	.323	.235	.423	.389	.488
Father Foreign	.123	.328	.176	.381	.188	.391
Father Absent	.012	.109	.008	.087	.004	.062
Siblings	4.697	2.846	3.699	2.593	2.915	2.315
Non-Farm Upbringing	.575	.495	.705	.457	.820	.385
Non-South Upbringing	.575	.495	.772	.420	.736	.442
Test Score	7.791	1.520	10.476	.500	12.293	.456
Years of Education	10.137	3.136	12.394	2.997	13.910	2.844
Vocational Training	.242	.428	.254	.436	.201	.401
Age	43.451	11.212	42.235	10.965	41.477	10.277
Experience	26.043	12.151	22.781	11.832	20.538	10.843
Job Tenure	10.529	9.971	9.694	9.339	9.805	9.005
Occupation	32.142	17.433	42.718	21.140	51.424	20.537
Ln Weeks Worked	3.792	.424	3.863	.313	3.885	.278
Ln Weekly Earnings	5.041	.645	5.375	.556	5.553	.559
Annual Earnings	8536	4823	12071	6569	15212	11134
Earnings 1/3	19.583	4.271	22.200	4.136	23.752	4.915
Ln Earnings	8.833	.810	9.238	.667	9.437	.652
Family Income	11717	6391	15595	7994	18664	11626
N (unweighted)	764		707		303	

Table 3A: Characteristics by Father's Education for Civilian, Male Head's of Households Aged 25 - 64 in 1971, with Earnings and Not in School: PSID Basic Sample

Level of Father's Education	Respondents in Basic Sample	Test Score		Years of Education		Occupation		Annual Earnings		Earnings$^{1/3}$		Ln Earnings		Family Income	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1) 0-5, or NA and father not literate	236	8.97	2.15	9.19	3.84	28.98	17.38	8552	5756	19.51	4.41	8.820	.829	11814	7379
2) 6-8, or NA and father literate	1353	9.81	1.95	11.42	3.14	38.49	20.54	10953	7187	21.25	4.61	9.086	.756	14226	8327
3) 9-11	157	10.38	1.71	12.74	2.85	43.36	22.13	12743	10558	22.45	4.39	9.280	.577	15817	11591
4) 12	292	10.42	1.72	13.27	2.67	46.67	20.67	13124	8263	22.69	4.65	9.286	.769	16196	9531
5) 12 plus Non-academic Training	23	10.48	1.85	13.36	1.59	46.44	18.26	10838	5052	21.68	3.16	9.201	.428	14582	6005
6) Some College	89	10.85	1.34	14.11	2.67	51.03	19.49	13117	6400	22.97	3.80	9.362	.511	16892	7021
7) College Degree	80	10.63	1.95	14.27	2.77	53.38	17.8	14347	8227	23.35	4.96	9.350	.929	18744	10134
8) Advanced or Professional Degree	44	10.98	2.00	16.14	1.91	58.80	19.43	18415	14563	24.56	7.16	9.435	1.133	22040	14952
9) Not Ascertained; Don't know	90	9.09	2.28	9.51	3.72	30.19	18.20	9021	5166	20.01	4.17	8.912	.729	12313	6607
Total	2366	9.92	1.98	11.75	3.42	39.99	21.09	11368	7782	21.49	4.71	9.118	.772	14682	8934
Eta^2		.061		.176		.093		.049		.051		.038		.041	
Number Respondents Reporting Dependent Variable		2122		2344		2359		2351		2351		2351		2212	

Table 3B: Regressions of Household Head's Characteristics on Father's Education for Civilian Males Aged 25-64 in 1971 with Earnings and Not in School: PSID Complete-Data Sample (N = 1774)

Dependent Variable		Unstandardized Coefficients (and Standard Errors) of Independent Variables			Constant	R^2	S.D. of Residual
		Father's Education B (S.E.)	Father's Education^2 B (S.E.)	Father Absent B (S.E.)			
Test Score	(1)	.1466 (.0142)			8.6994	.057	1.8975
	(2)	.2347 (.0584)	[-.0046] (.0029)	[-.5405] (.4963)	8.3295	.059	1.8968
Years of Education	(1)	.3968 (.0230)			8.5513	.144	3.0823
	(2)	.5354 (.0947)	[-.0072] (.0047)	-2.0769 (.8050)	7.9790	.148	3.0766
Occupation	(1)	1.8634 (.1508)			25.0210	.079	20.2202
	(2)	2.3750 (.6222)	[-.0264] (.0312)	[-5.2412] (5.2911)	22.8888	.080	20.2224
Annual Earnings	(1)	422.66 (56.77)			7922.64	.030	7613.82
	(2)	623.05 (234.27)	[-10.35] (11.74)	[-2176.59] (1992.18)	7088.46	.031	7614.12
Annual Earnings$^{1/3}$	(1)	.2813 (.0339)			19.2343	.037	4.5513
	(2)	.5234 (.1400)	[-.0125] (.0070)	[-1.2847] (1.1901)	18.2151	.040	4.5486
ln Annual Earnings	(1)	.04144 (.00553)			8.78838	.031	.74121
	(2)	.08711 (.02279)	-.00236 (.00114)	[-.18554] (.19377)	8.59568	.033	.74059
Family Income	(1)	456.37 (64.95)			11026.10	.027	8712.20
	(2)	[379.05] (268.10)	[3.99] (13.44)	[-2539.54] (2279.89)	11376.13	.028	8713.74

Coefficients in brackets are less than 1.96 times their standard errors.

Table 4A: Characteristics by Father's Occupation for Civilian, Male Heads of Households Aged 25 - 64 in 1971, with Earnings and Not in School: PSID Basic Sample

Father's Occupation (Duncan Score)	Respondents in Basic Sample	Test Score		Years of Education		Occupation		Annual Earnings		Earnings$^{1/3}$		Ln Earnings		Family Income	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Professional and Technical Workers (75)	139	10.89	1.81	14.45	2.55	49.89	21.86	13212	6966	22.758	4.700	9.293	.771	16525	7645
Managers, Officials and Proprietors (58)	99	10.95	1.45	14.24	2.07	54.10	17.77	15012	9940	23.883	4.345	9.464	.619	18996	11907
Self-employed Businessmen (48)	159	10.50	1.87	13.83	3.05	50.54	18.96	14875	10082	23.470	5.204	9.391	.698	18897	11241
Clerical and Sales Workers (47)	104	10.32	1.71	13.28	2.70	48.31	19.31	12870	8467	22.462	4.704	9.271	.640	16254	10047
Craftsmen and Foremen (31)	489	9.98	1.79	11.77	2.87	41.01	19.79	11405	6233	21.673	4.444	9.144	.794	14522	7297
Operatives (18)	359	9.91	1.92	11.79	3.01	39.19	21.63	11033	6641	21.516	4.068	9.145	.658	14500	7366
Farmers and Farm Managers (14)	613	9.45	2.13	10.54	3.56	34.01	19.95	10101	8481	20.480	4.849	8.967	.793	13225	9551
Laborers and Service Workers (12)	213	9.29	2.13	10.12	3.68	32.45	19.74	9656	5861	20.363	4.561	8.936	.912	12789	6892
Protective and Misc. Workers; Don't know Not Ascertained (NA)	184	10.01	1.76	11.59	3.31	38.61	20.60	10818	7616	21.157	4.551	9.080	.713	14045	9456
No Occupation (NA)	5	9.75	2.35	11.85	6.55	43.11	29.25	14574	15911	21.426	9.496	8.932	1.462	17996	14227
Total	2366	9.92	1.98	11.75	3.42	39.99	21.09	11376	7783	21.492	4.709	9.118	.774	14683	8933
Eta^2	----	.058		.145		.089		.040		.047		.037		.041	
Number Respondents Reporting Dependent Variable		2122		2344		2359		2351		2351		2351		2212	

Table 4B: Regressions of Household Head's Characteristics on Father's Occupation for Civilian Males Aged 25-64 in 1971 with Earnings and Not in School: PSID Complete-Data Sample (N = 1774)

		Unstandardized Coefficients (and Standard Errors) of Independent Variables			Constant	R^2	S.D. of Residual
		Father's Occup. B (S.E.)	Father's Occup.^{2} B (S.E.)	Father Absent B (S.E.)			
Test Score	(1)	.02625 (.00249)			9.21287	.059	1.89550
	(2)	.04248 (.01082)	[-.00021] (.00013)	[-.56206] (.49682)	8.99030	.061	1.89477
Years of Education	(1)	.06788 (.00406)			10.03001	.136	3.09636
	(2)	.12269 (.01761)	-.00070 (.00022)	-2.23348 (.80859)	9.28103	.144	3.08383
Occupation	(1)	.3371 (.0265)			31.4452	.084	20.1701
	(2)	.7531 (.1147)	-.0053 (.0014)	[-6.7149] (5.2697)	25.6747	.092	20.0978
Annual Earnings	(1)	78.87 (9.97)			9311.58	.034	7598.93
	(2)	198.45 (43.29)	-1.52 (.53)	[-2571.95] (1988.46)	7658.34	.039	7583.65
Earnings$^{1/3}$	(1)	.05179 (.00596)			20.17863	.041	4.54289
	(2)	.13306 (.02587)	-.00103 (.00032)	[-1.49742] (1.18802)	19.05282	.047	4.53092
Ln Earnings	(1)	.00744 (.00097)			8.93297	.032	.74074
	(2)	.01948 (.00422)	-.00015 (.00005)	[-.21191] (.19383)	8.76605	.037	.73922
Family Income	(1)	90.24 (11.39)			12381.89	.034	8680.23
	(2)	230.18 (49.45)	-1.78 (.61)	[-3166.98] (2271.02)	10448.38	.040	8661.29

Coefficients in brackets are less than 1.96 times their standard errors.

Table 5A: Characteristics by Number of Siblings for Civilian Male Heads of Households Aged 25 -64 in 1971, with Earnings and Not in School: PSID Basic Sample

Number of Siblings	Number of Respondents in Survey	Test Score		Years of Education		Occupation		Annual Earnings		Earnings$^{1/3}$		Ln Earnings		Family Income	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
None	152	10.39	1.72	13.08	3.29	45.10	23.06	13343	9343	22.65	5.03	9.274	.781	16659	9944
1	377	10.37	1.90	13.08	3.18	45.87	20.90	13434	9575	22.72	4.94	9.294	.703	16562	10687
2	377	10.41	1.88	12.70	3.16	44.81	21.77	11951	6481	22.05	4.39	9.204	.751	15611	8023
3	358	10.09	1.76	12.25	2.99	40.15	21.32	11774	7871	21.81	4.58	9.173	.712	15250	9402
4	283	9.85	1.92	11.43	3.26	37.52	19.56	10814	6636	21.28	4.27	9.108	.659	14043	7887
5	199	9.78	1.93	11.05	3.37	37.26	19.87	11161	9899	21.14	5.10	9.055	.832	14675	10920
6	158	9.34	2.06	10.48	3.31	37.34	19.69	10212	6259	20.85	4.32	9.032	.765	13411	7920
7	145	9.22	2.14	9.86	3.20	32.77	19.34	9049	5622	19.87	4.59	8.863	.891	12519	7275
8 or More	307	9.09	2.18	10.07	3.42	33.02	19.01	9035	5616	19.89	4.48	8.876	.837	11746	5543
Not Reported	8	9.40	2.40	9.84	3.10	34.62	15.85	9330	4230	20.53	3.60	9.020	.585	14883	6292
Total	2366	9.92	1.98	11.75	3.42	39.99	21.09	11367	7783	21.49	4.71	9.119	.770	14683	8934
Eta^2		.060		.114		.050		.036		.042		.035		.032	
Number of Respondents Reporting Dependent Variable		2122		2344		2859		2351		2351		2351		2212	

Table 5B: Regression of Household Head's Characteristics on Number of Siblings for Civilian Males Aged 25-64 in 1971 with Earnings and Not in School: PSID Complete-Data Sample (N = 1774)

		Unstandardized Coefficients (and Standard Errors) of Independent Variables		Constant	R^2	S.D. of Residual
		Siblings	Siblings^2			
		B (S.E.)	B (S.E.)			
Test Score	(1)	-.18627 (.01656)		10.67816	.067	1.8880
	(2)	-.20103 (.06106)	[.00157] (.00627)	10.70015	.067	1.8885
Years Education	(1)	-.4149 (.0275)		13.5606	.114	3.1364
	(2)	-.6586 (.1013)	.0260 (.0104)	13.9238	.117	3.1317
Occupation	(1)	-1.8668 (.1795)		48.2306	.058	20.4587
	(2)	-3.3650 (.6607)	.1599 (.0679)	50.4630	.060	20.4325
Annual Earnings	(1)	-539.47 (66.62)		13636.05	.036	7592.78
	(2)	-1076.97 (245.22)	57.36 (25.19)	14436.88	.039	7583.82
$\text{Earnings}^{1/3}$	(1)	-.3659 (.0398)		23.0633	.046	4.5317
	(2)	-.6152 (.1464)	.0266 (.0150)	23.4347	.047	4.5289
Ln Earnings	(1)	-.05450 (.00648)		9.35479	.038	.73828
	(2)	-.07977 (.02387)	[.00270] (.00245)	9.39244	.039	.73823
Family Income	(1)	-593.61 (76.20)		17238.25	.033	8685.26
	(2)	-820.49 (280.86)	[24.21] (28.85)	17576.29	.034	8685.98

Coefficients in brackets are less than 1.96 times their standard errors.

Table 6: Characteristics by Race for Civilian, Male Household Heads Aged 24-64 in 1971, with Positive Earnings and Not in School: PSID Basic Sample.

Race of Respondent	Number Respondents in Survey	Test Score		Years of Education		Occupation		Annual Earnings		Earnings 1/3		Ln Earnings		Family Income	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
White	2082	10.10	1.80	12.03	3.24	41.62	20.87	11786	7761	21.816	4.618	9.170	.733	15115	8847
Black	202	8.37	2.61	9.60	3.76	25.89	16.81	7350	4209	18.570	4.239	8.661	.881	10311	5967
Other	81	8.81	2.48	10.00	4.56	33.27	22.15	10436	11470	20.371	5.484	8.910	1.030	13938	13425
Total	2366	9.92	1.98	11.75	3.42	39.99	21.10	11366	7785	21.492	4.709	9.118	.772	14681	8937
Eta^2		.069		.048		.047		.025		.039		.036		.022	
Number of Respondents Reporting Dependent Variable		2122		2344		2359		2351		2351		2351		2212	

Table 7A: Characteristics by Age for Civilian, Male Heads of Households Aged 25 - 64 in 1971, with Positive Earnings and Not in School: PSID Basic Sample

Age	Number of Respondents in Survey	Test Score		Years of Education		Occupation		Annual Earnings		Annual Earnings 1/3		Ln Earnings		Family Income	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
25-29	361	10.14	1.60	12.56	2.51	41.23	21.05	9486	4870	20.55	3.64	9.016	.602	11546	5557
30-34	320	10.12	1.85	12.63	2.78	41.90	21.65	11209	5788	21.72	3.83	9.186	.561	13602	6390
35-39	300	9.89	1.96	12.23	3.42	40.83	22.57	12177	7567	22.10	4.56	9.211	.744	15180	8889
40-44	396	10.19	1.81	11.92	3.48	42.00	21.18	13309	9047	22.79	4.54	9.319	.617	16765	9809
45-49	326	9.96	1.77	11.44	3.48	39.36	20.34	12061	7777	22.05	4.50	9.210	.684	16208	9436
50-54	263	9.99	2.10	11.26	3.74	38.29	20.14	11563	6699	21.83	4.20	9.191	.615	15857	7969
55-59	201	9.32	2.25	10.31	3.73	36.78	20.11	11005	8868	20.75	5.77	8.953	1.031	14871	10393
60-64	199	9.09	2.60	10.46	3.83	35.78	20.32	8952	10819	18.75	6.33	8.585	1.231	13331	12186
Total	2366	9.92	1.98	11.75	3.42	39.99	21.09	11367	7783	21.49	4.71	9.119	.770	14683	8933
Eta^2		.030		.051		.009		.030		.054		.064		.038	
Number of Respondents Reporting on Dependent Variable		2122		2344		2359		2351		2351		2351		2212	

Table 7B: Regression of Household Head's Characteristics on Age for Civilian Males Aged 25-64 in 1971 with Earnings and Not in School: PSID Complete-Data Sample (N = 1774)

Dependent Variable		Unstandardized Coefficients (and Standard Errors) of Independent Variables		Constant	R^2	S.D. of Residual
		Age B (S.E.)	Age^2 B (S.E.)			
Test Score	(1)	-.02109 (.00422)		10.85337	.014	1.94057
	(2)	.09002 (.03387)	-.00128 (.00039)	8.59385	.020	1.93516
Years of Education	(1)	-.06540 (.00707)		14.73413	.046	3.25388
	(2)	[.05422] (.05690)	-.00138 (.00065)	12.30143	.048	3.25068
Occupation	(1)	-.20138 (.04556)		49.56415	.011	20.95859
	(2)	[.59726] (.36645)	-.00919 (.00419)	33.32247	.014	20.93602
Annual Earnings	(1)	[-8.20] (16.81)		11897.42	.000	7731.48
	(2)	1025.66 (133.08)	-11.90 (1.52)	-9128.07	.034	7603.20
$Earnings^{1/3}$	(1)	-.03492 (.01005)		23.13122	.007	4.62296
	(2)	.78453 (.07852)	-.00943 (.00090)	6.46621	.065	4.48629
Ln Earnings	(1)	-.00808 (.00163)		9.48740	.014	.74768
	(2)	.12587 (.01269)	-.00154 (.00014)	6.76310	.073	.72508
Family Income	(1)	69.41 (19.13)		11993.01	.007	8800.09
	(2)	1261.78 (151.40)	-13.72 (1.73)	-12255.98	.041	8650.08

Coefficients in brackets are less than 1.96 times their standard errors.

Table 8A: Characteristics by Test Score for Civilian Male Household Heads Aged 25 - 64 in 1971 with Earnings and Not in School: PSID Basic Sample

Test Score	Number of Respondents in Survey	Years of Education		Occupation		Annual Earnings			Earnings$^{1/3}$		Ln Earnings		Family Income	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	V	Mean	S.D.	Mean	S.D.	Mean	S.D.
1-5	74	7.21	3.72	26.75	16.31	5664	3989	.704	16.46	5.17	8.175	1.362	8219	6098
6-7	145	9.27	2.98	28.40	15.56	7148	3869	.541	18.65	3.46	8.722	.603	10137	4902
8	208	10.53	2.76	32.26	16.75	8315	4483	.539	19.42	4.26	8.807	.802	11272	5581
9	305	10.85	2.94	34.05	18.26	9790	5172	.528	20.66	4.05	9.012	.724	12799	6882
10	493	12.04	2.96	38.52	20.51	10920	5855	.536	21.46	4.06	9.130	.725	13924	7468
11	461	12.62	3.02	45.87	21.48	12906	7064	.547	22.68	4.27	9.305	.633	16702	8218
12	311	13.53	2.85	47.82	20.49	14589	9875	.677	23.51	4.63	9.414	.611	18354	11041
13	126	14.64	2.75	58.10	19.70	16365	13475	.823	24.17	5.41	9.478	.709	19433	13820
NA	244	10.78	3.86	37.09	20.83	11483	9031	.786	21.36	5.10	9.097	.754	15123	9824
Total	2366	11.75	3.42	39.99	21.09	11367	7783	.685	21.49	4.71	9.118	.772	14683	8933
Eta^2		.203		.128		.106			.133		.122		.099	
Number of Respondents Reporting on Dependent Variable		2344		2359		2351			2351		2351		2212	

Table 8B: Regression of Household Head's Characteristics on Test Score for Civlian Males Aged 25-64 in 1971 with Earnings and Not in School: PSID Complete-Data Sample (N = 1776)

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		Unstandardized Coefficients (and Standard Errors) of Independent Variables		Constant	R^2	S.D. of Residual
		Test Score B (S.E.)	Test Score^2 B (S.E.)			
Years of Education	(1)	.8059 (.0357)		3.9306	.224	2.9357
	(2)	.6122 (.2086)	[.0108] (.0114)	4.7534	.224	2.9358
Occupation	(1)	3.8621 (.2392)		2.5516	.128	19.6759
	(2)	-2.9986 (1.3889)	.3805 (.0759)	31.6844	.140	19.5433
Annual Earnings	(1)	1334.43 (88.48)		-1738.58	.114	7278.98
	(2)	[-520.71] (515.50)	102.90 (28.17)	6138.93	.120	7253.76
Earnings$^{1/3}$	(1)	.8962 (.0522)		12.7237	.143	4.2954
	(2)	[.4891] (.3052)	[.0226] (.0167)	14.4525	.143	4.2943
Ln Earnings	(1) (	.13609 (.00856)		7.78884	.125	.70435
	(2)	.16417 (.05007)	[-.00156] (.00274)	7.66961	.125	.70448
Family Income	(1)	1413.31 (101.99)		868.71	.098	8389.81
	(2)	[-219.53] (595.10)	90.57 (32.52)	7802.28	.102	8373.86

Coefficients in brackets are less than 1.96 times their standard errors.

Table 8C: Coefficients for Regressions of Years of Education, Occupation, and Ln Earnings on Test Score Standardized by Test Score: PSID, Talent, Veterans and Kalemazoo Complete Data Samples.

	Standard Deviation of Test	Dependent Variable Coefficient standardized by Test Years of Education	Occupation	Ln Earnings
PSID 25-64 year olds (born 1907-1946)	1.954	1.575	7.542	.266
PSID 25-34 year olds (born 1937-1946)	1.712	1.054	7.440	.166
PSID 35-44 year olds (born 1927-1936)	1.821	1.472	7.086	.223
PSID 45-54 year olds (born 1917-1926)	1.956	1.838	8.104	.261
PSID 55-64 year olds (born 1907-1916)	2.398	1.645	6.601	.225
Talent 28 year olds (born 1944)	14.602	1.362	11.231	.0808*
Veterans 25-34 year olds** (born 1930-1939)	13.685	1.251	8.453	.131
Veterans 30-34 year olds** (born 1930-1934)	14.286	1.521	10.072	.175
Kalamazoo 35-64 year olds (born 1914-1943)	15.326	1.572	10. 500	.163

*The Talent survey reports the natural log of hourly earnings, and is therefore not comparable to annual earnings measures.

**30-34 year old veterans are probably more representative of U.S. men than are 25-29 year olds, due to selective service restrictions. See Appendix G.

To standardize coefficients I multiplied unstandardized coefficients by the standard deviation of the Test Score for each sample or subsample.

Table 9A: Characteristics by Education for Civilian Male Household Heads Aged 25-64 in 1971, with Earnings and Not in School: PSID Basic Sample

Level of Education	Respondents in Basic Sample	Test Score		Occupation		Annual Earnings		Earnings 1/3		Ln Earnings		Family Income	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
0-5	98	7.25	2.69	21.11	11.63	5881	4777	16.99	4.39	8.372	.967	8180	5750
6-8	350	8.70	2.03	26.99	14.85	7491	4878	18.63	4.34	8.672	.863	10515	5701
9-11	394	9.25	1.88	29.46	15.54	8801	4027	20.03	3.66	8.927	.699	12035	5876
12	727	10.12	1.56	36.68	17.88	11013	5662	21.63	3.75	9.169	.613	14198	6722
Some College	369	10.54	1.63	46.68	18.30	12552	8600	22.41	4.35	9.261	.705	15805	9512
College Degree	257	11.04	1.38	62.22	14.52	16917	8814	24.92	4.36	9.599	.563	20760	10030
Advanced Degree	150	11.29	1.39	72.02	7.65	19998	12732	26.15	5.12	9.734	.603	24157	14205
Not Ascertained; Don't know	22	9.99	2.30	36.07	16.42	11877	8221	21.67	5.21	9.134	.826	16531	8491
Total	2366	9.89	1.98	39.99	21.09	11367	7783	21.49	4.71	9.118	.771	14683	8933
Eta^2		.230		.429		.213		.236		.189		.196	
Number Respondents Reporting Dependent Variable		2352		2359		2351		2351		2351		2212	

Table 9B: Regressions of Household Head's Characteristics on Education for Civilian Males Aged 25-64 in 1971 with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Dependent Variable		Years of Education B (S.E.)	Years of Education² B (S.E.)	Years of College B (S.E.)	H. S. Diploma B (S.E.)	College Graduation B (S.E.)	Graduate Degree B (S.E.)	Vocational Training B (S.E.)	Years of Higher Ed. B (S.E.)	Constant	R^2 (S.D. of Residual)
		Unstandardized Regression Coefficients (and Standard Errors) of Independent Variables									
Occupation	(1)	3.911 (.118)								-5.747	.382 (16.564)
	(2)	-2.637 (.559)	.287 (.024)							28.269	.428 (15.936)
	(3)	1.310 (.316)		3.852 (.666)	4.276 (1.514)	5.740 (2.248)	6.713 (1.928)	2.738 (.936)		16.212	.436 (15.846)
	(4)	2.141 (.193)				5.608 (2.196)			2.927 (.561)	10.845	.430 (15.916)
	(5)	2.035 (.196)				5.196 (2.195)		2.904 (.930)	3.324 (.573)	11.020	.433 (15.877)
				Years of Elementary School							
Annual Earnings	(1)	1036.03 (49.34)								-837.45	.199 (6918.89)
	(2)	[-357.94] (240.23)	61.19 (10.32)							6404.30	.215 (6853.21)
	(3)	895.38 (93.15)		-544.89 (261.95)	*	2965.22 (657.34)	*	[651.25] (391.50)		4378.94	.218 (6843.28)
	(4)	698.92 (83.25)				2421.05 (945.29)			[321.20] (241.28)	2360.68	.216 (6850.94)
	(5)	671.09 (84.48)			2313.18 (946.27)			[760.07] (401.07)	[425.21] (247.28)	2406.41	.217 (6845.93)

Table 9B: Regressions of Household Head's Characteristics on Education for Civilian Males Aged 25-64 in 1971 with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Dependent		Years of Education B (S.E.)	Years of Education^2 B (S.E.)	Years of College B (S.E.)	H. S. Diploma B (S.E.)	College Graduation B (S.E.)	Graduate Degree B (S.E.)	Vocational Training B (S.E.)	Years of Higher Ed. B (S.E.)	Constant	R^2 (S.D. of Residual)
		Unstandardized Regression Coefficients (and Standard Errors) of Independent Variables									
Earnings$^{1/3}$	(1)	.6805 (.0289)								13.5123	.239 (4.0470)
	(2)	.2873 (.1416)	.0173 (.0061)							15.5547	.242 (4.0390)
	(3)	.5830 (.0392)		*	*	1.3742 (.3432)	*	.7990 (.2298)		14.2353	.249 (4.0225)
	(4)	.6218 (.0490)				1.6311 (.5567)			[-.1555] (.1421)	14.1027	.244 (4.0348)
	(5)	.5932 (.0497)				1.5203 (.5562)		.7815 (.2357)	[-.0485] (.1453)	14.1497	.249 (4.0235)
Ln Earnings	(1)	.10014 (.00481)								7.94669	.196 (.67493)
	(2)	.08183 (.02366)	[.00080] (.00102)							8.04172	.197 (.67503)
	(3)	.09270 (.00655)		*	*	.12170 (.05732)	*	.15487 (.03838)		7.97646	.205 (.67187)
	(4)	.10419 (.00819)				.23144 (.09302)			[-.04938] (.02374)	7.91549	.199 (.67413)
	(5)	.09891 (.00829)				.21100 (.09286)		.14419 (.03936)	[-.02966] (.02427)	7.92408	.205 (.67180)

Table 9B: Regressions of Household Head's Characteristics on Education for Civilian Males Aged 25-64 in 1971 with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Dependent Variable		Years of Education B (S.E.)	Years of Education^2 B (S.E.)	Years of College B (S.E.)	H. S. Diploma B (S.E.)	College Graduation B (S.E.)	Graduate Degree B (S.E.)	Vocational Training B (S.E.)	Years of Higher Ed. B (S.E.)	Constant	R^2 (S.D. of Residual)
		Unstandardized Regression Coefficients (and Standard Errors) of Independent Variables									
Total Family Income	(1)	1144.22 (56.82)								1261.88	.186 (7967.83)
	(2)	[-188.09] (277.50)	58.48 (11.93)							8183.28	.197 (7916.51)
	(3)	843.08 (76.92)		*	*	3990.40 (673.19)	*	1041.06 (450.78)		3882.04	.203 (7891.20)
	(4)	841.04 (96.04)				3532.52 (1090.46)			[52.03] (278.33)	4175.55	.200 (7903.00)
	(5)	800.23 (97.39)				3374.31 (1090.90)		1114.67 (462.37)	[204.55] (285.07)	4242.64	.203 (7892.27)

*These variables would have been insignificant if entered in this regression. They were therefore not entered.

In regressions (3), the following variables were added to the regression if they were significant after Years Education: Years Elementary School, Years College, College Graduation, Graduate Degree, Vocational Training, Years of Higher Education.

*Coefficients in brackets are less than 1.96 times their standard errors.

Variable Definitions

Years of Elementary School = Education if Education LE 8; otherwise = 8.
Years of College = 0 if Education LE 12; = Education -12 if Education GT 12 and LT 16; = 4 if Education GE 16.
High School Diploma = 0 if Education LT 12; = 1 if Education GE 12.
College Graduation = 0 if Education LT 16; = 1 if Education GE 16.
Graduate Degree = 0 if Education LT 18; = 1 if Education = 18.
Years of Higher Education = 0 if Education LE 12; = Education -12 if Education GT 12.

Table 10: Regression of Household Head's Characteristics on Education for Civilian Males Aged 25-64 in 1971, with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Dependent Variable		Years of Education B (S.E.)	Years of Higher Ed. B (S.E.)	College Graduation B (S.E.)	Experience B (S.E.)	Experience^2 B (S.E.)	Constant	R^2	S.D. of Residual
Occupation	(1)	2.1411 (.1934)	2.9270 (.5605)	5.6084 (2.1960)			10.8449	.430	15.9158
	(2)	2.1285 (.2076)	2.9347 (.5625)	5.6028 (2.1968)	[-.0060] (.0357)		11.1267	.430	15.9202
	(3)	2.1319 (.2110)	2.9276 (.5680)	5.6124 (2.2000)	[-.0176] (.1332)	[.0002] (.0026)	11.2000	.430	15.9247
Annual Earnings	(1)	698.92 (83.25)	[321.20] (241.28)	2421.05 (945.29)			2360.68	.216	6850.94
	(2)	805.91 (89.08)	[256.72] (241.39)	2466.89 (942.70)	50.80 (15.34)		-37.87	.221	6831.72
	(3)	674.51 (88.82)	529.21 (239.12)	2092.90 (926.12)	500.23 (56.07)	-9.24 (1.11)	-2877.07	.250	6703.64
Earnings$^{1/3}$	(1)	.62176 (.04903)	[-.15545] (.14210)	1.63114 (.55673)			14.10369	.244	4.03483
	(2)	.63658 (.05262)	[-.16438] (.14259)	1.63745 (.55683)	[.00704] (.00906)		13.77047	.245	4.03530
	(3)	.53576 (.05176)	[.04470] (.13933)	1.35049 (.53962)	.35189 (.03267)	-.00709 (.00065)	11.59192	.293	3.90598
Ln Earnings	(1)	.10419 (.00819)	-.04938 (.02374)	.23144 (.09302)			7.91549	.199	.67413
	(2)	.10060 (.00879)	-.04722 (.02382)	.22990 (.09302)	[-.00171] (.00151)		7.99605	.200	.67410
	(3)	.08405 (.00866)	[-.01291] (.02330)	.18281 (.09025)	.05488 (.00546)	-.00116 (.00011)	7.63855	.249	.65328

Table 10: Regression of Household Head's Characteristics on Education for Civilian Males Aged 25-64 in 1971, with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Dependent Variable		Years of Education B (S.E.)	Years of Higher Ed. B (S.E.)	College Graduation B (S.E.)	Experience B (S.E.)	Experience^2 B (S.E.)	Constant	R^2	S.D. of Residual
Family Income	(1)	841.04	[52.03]	3532.52			4175.55	.200	7903.008
		(96.04)	(278.33)	(1090.46)					
	(2)	1141.15	[-128.86]	3661.23	142.50		-2552.59	.229	7759.79
		(101.18)	(274.19)	(1070.77)	(17.42)				
	(3)	983.97	[197.11]	3213.85	680.13	-11.05	-5948.97	.262	7598.03
		(100.68)	(271.03)	(1049.68)	(63.55)	(1.26)			

Coefficients in brackets are less than 1.96 times their standard errors.

Table 12: Regression of Test Score on Background Characteristics of Civilian, Male Heads of Households Aged 25-64 in 1971, with Earnings and Not In School: PSID Complete-Data Sample (N = 1774)

Independent Variable	Zero Order Correlation	Equation 2 B (S.E.)	Equation 2 Beta	Equation 3 B (S.E.)	Equation 3 Beta	Equation 5 B (S.E.)	Equation 5 Beta	Equation 6 B (S.E.)	Equation 6 Beta
Respondent White	.266	1.23605	.194	1.27607	.200	1.28787	.202	1.03742	.163
		(.14617)		(.14562)		(.14440)		(.13[illegible])	
Father's Education	.239	.08003	.130	.07690	.125	.07627	.124	.03111	.051
		(.01522)		(.01530)		(.01518)		(.01490)	
Father's Occupation	.243	[.00410]	.038	[.00416]	.039	[.00391]	.036	[.00277]	.026
		(.00526)		(.00523)		(.00520)		(.00492)	
Father White Collar	.217	[.28525]	.061	[.29207]	.063	[.29800]	.064	[.05521]	.012
		(.21106)		(.20987)		(.20875)		(.20016)	
Father Foreign	.069	.27749	.052	.31686	.060	.30331	.057	[.19143]	.034
		(.12095)		(.12180)		(.12134)		(.11624)	
Father Absent	-.023	[-.18904]	-.009	[-.17920]	-.008	[-.11702]	-.005	[.[illegible]]	.[illegible]
		(.46648)		(.46377)		(.46044)		(.43848)	
Siblings	-.258	-.09849	-.136	-.09128	-.126	-.09436	-.131	-.04923	-.068
		(.01683)		(.01679)		(.01666)		(.01616)	
Non-Farm Upbringing	.195	.29561	.070	.25945	.062	.23426	.056	.17702	.042
		(.10375)		(.10339)		(.10302)		(.09913)	
Non-South Upbringing	.209	.37410	.088	.35365	.083	.33691	.079	.19911	.047
		(.10140)		(.10088)		(.10052)		(.09691)	
Age	-.118			-.01409	-.079	-.01472	-.082	[-.[illegible]]	.[illegible]
				(.00398)		(.00395)		(.00386)	
Age²*	-.078			-.00118	-.072	-.00108	-.066	-.00088	-.053
				(.00036)		(.00036)		(.00033)	
Father's Occup. X Siblings*	.064					.00241	.056	.00146	.034
						(.00095)		(.00091)	
White X Siblings*	-.055					-.12987	-.058	-.07580	-.034
						(.04874)		(.04649)	
Age X Father's Occupation*	.095					.00068	.069	[.00039]	.039
						(.00022)		(.00021)	
Age X White*	.070					.03924	.067	.02838	.048
						(.01281)		(.01232)	

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error) for Selected Equations

Table 12: Regression of Test Score on Background Characteristics of Civilian, Male Heads of Households Aged 25-64 in 1971, with Earnings and Not In School: PSID Complete-Data Sample (N = 1774)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error) for Selected Equations

Independent Variable	Zero Order Correlation	Equation 2 B	Equation 2 Beta	Equation 3 B	Equation 3 Beta	Equation 5 B	Equation 5 Beta	Equation 6 B	Equation 6 Beta
Years of Education	.473							.20496 (.02320)	.349
Years of Higher Education	.[illegible]							[.02640] (.06034)	.025
College Graduation	.[illegible]							[-.21294] (.23099)	-.042
Constant			7.[illegible]5762		6.37052		8.49[illegible]		6.02739
R^2			.176		.187		.204		.283
S.D. Residual			1.77739		1.76648		1.75011		1.66284

* Squared terms have been made uncorrelated with the corresponding liniar variable. Multiplicative interactions have been constructed so as to be uncorrelated with their components. Detailed definitions are given in Table 19.

In regression (5), all interactions between Respondent White, Father's Education, Father's Occupation, Father Absent, Siblings and Age were considered after all other variables had been entered. The interaction which increased R^2 the most was added to the equation. Then remaining interactions were considered, until no interaction that could be entered would increase R^2 significantly (0.05 level. two-tailed).

Coefficients in brackets are less than 1.96 times their standard errors.

Table 13A: Regression of Years of Education on Characteristics of Civilian Male Heads of Households Aged 25-64 in 1971 with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Independent Variable	Zero Order Correlation	Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error) for Selection Equations									
		Equation 2		Equation 3		Equation 4		Equation 5		Equation 6	
		B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
Respondent White	.205	1.04441 (.23469)	.096	1.15551 (.23161)	.106	.48248 (.22324)	.044	.50458 (.22147)	.047	1.15868 (.10677)	.229
Father's Education	.379	.25457 (.02459)	.243	.23771 (.02447)	.227	.19830 (.02324)	.190	.19423 (.02307)	.186	.23035 (.02422)	.220
Father's Occupation	.369	[.00557] (.00837)	.030	[.00493] (.00825)	.027	[.00274] (.00778)	.015	[.00237] (.00774)	.013	[.00480] (.00817)	.026
Father White Collar	.349	1.21683 (.33584)	.153	1.26808 (.33091)	.160	1.11638 (.31241)	.140	1.11644 (.31014)	.140	1.24734 (.32749)	.157
Father Foreign	.062	.43979 (.19241)	.048	.61317 (.19198)	.068	.44642 (.18150)	.049	.42906 (.18102)	.047	.60633 (.1[illegible]	.067
Father Absent	-.055	-1.93861 (.74589)	-.053	-1.98505 (.73478)	-.054	-1.90500 (.69334)	-.052	-1.88169 (.68834)	-.051	-1.92525 (.72715)	-.052
Siblings	-.337	-.23273 (.02681)	-.189	-.21524 (.02651)	-.175	-.16723 (.02522)	-.136	-.18103 (.02513)	-.147	-.22979 (.02631)	-.187
Non-Farm Upbringing	.234	[.33122] (.16926)	.046	[.23632] (.16718)	.033	[.09384] (.15804)	.013	.08352 (.15706)	.012	[.21548] (.16563)	.030
Non-South Upbringing	.216	.70951 (.16138)	.098	.66869 (.15909)	.092	.48363 (.15063)	.067	[.51173] (.14963)	.071	.70237 (.15744)	.097
Father Occupation^{2*}	-.065	-.00055 (.00021)	-.056	-.00056 (.00021)	-.057	-.00060 (.00020)	-.061	-.00044 (.00020)	-.045	[-.00034] (.00021)	-.035
Siblings^{2*}	.056	[.01708] (.00946)	.037	[.01276] (.00933)	.027	[.01341] (.00881)	.029	[.00789] (.00886)	.017	.00562 (.00936)	.012

Table 13A: Regression of Years of Education on Characteristics of Civilian Male Heads of Households Aged 25-64 in 1971 with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error) for Selection Equations

Independent Variable	Zero Order Correlation	Equation 2		Equation 3		Equation 4		Equation 5		Equation 6	
		B	Beta	B	Beta	B	Beta	B	Beta	B	Beta
Age	-.215			-.04460 (.00628)	-.146	-.03722 (.00594)	-.122	-.03788 (.00590)	-.124	-.04509 (.00621)	-.148
Age^2*	-.049			-.00135 (.00056)	-.048	[-.00074] (.00053)	-.026	[-.00056] (.00053)	-.020	-.00104 (.00056)	-.037
Test Score	.473					.52286 (.03543)	.307	.50598 (.03537)	.297		
White X Siblings*	-.093							-.16898 (.07340)	-.044	.22593 (.07744)	-.039
White X Father Absent	.048							3.42057 (1.43553)	.045	3.47983 (1.51649)	.045
White X Father's Ed.	-.046							-.19911 (.06209)	-.061	-.18796 (.06558)	-.057
Age X Father's Occ.	.106							.00117 (.00033)	.070	.00165 (.00035)	.098
Constant		8.15737		7.63134		4.26546		4.24487		8.12496	
R^2		.284		.306		.383		.395		.324	
S.D. of Residual		2.82676		2.78372		2.62663		2.60403		2.75089	

In regression (5), all interactions between Respondent White, Father's Education, Father's Occupation, Father Absent, Siblings, Test Score & Age were considered after all other variables had been entered. The interaction which increased R^2 the most was added to the equation. Remaining interactions were then considered until no interaction that could be entered would increase R^2 significantly (0.05 level, two-tailed).

Coefficients in brackets are less than 1.96 times their standard errors.

*All squared terms and multiplicative interactions were constructed so as to be uncorrelated with their components. Table 19 gives their detailed definitions.

Table 13B: Regression of Education on Characteristics of Civilian, Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School, by Race: PSID Complete Data Sample (N = 1774)

Unstandardized Coefficient (B) (and Standard Error)
and Zero-Order Correlation (r)

	White			Non-White		
	B (S.E.)	B (S.E.)	r	B (S.E.)	B (S.E.)	r
Father's Education	.2009 (.0280)	.1587 (.0267)	.359	.3008 (.0500)	.3059 (.0464)	.432
Father's Occupation	[-.0012] (.0097)	[-.0019] (.0091)	.347	.0378 (.0187)	[.0305] (.0174)	.462
White Collar Father	1.3337 (.3774)	1.1825 (.3571)	.336	1.1601 (.9284)	[.9740] (.8626)	.450
Father Absent	[-.5434] (1.0022)	[-.4850] (.9479)	-.003	-3.9037 (.8375)	-3.9001 (.7779)	-.162
Non-Farm Upbringing	.4438 (.1928)	[.2603] (.1829)	.234	.6566 (.3160)	[.5018] (.2940)	.203
Non-South Upbringing	.7693 (.1803)	.6159 (.1710)	.149	[.3997] (.3511)	[-.2326] (.3336)	-.316
Siblings	-.2643 (.0312)	-.2048 (.0299)	-.347	[.0257] (.0512)	[.0044] (.0476)	-.078
Age	-.0367 (.0072)	-.0326 (.0069)	-.212	-.0926 (.0134)	-.0734 (.0126)	-.321
Test Score		.5322 (.0437)	.438		.4868 (.0540)	.471
Constant	11.8281	6.7010		9.8440	5.5273	
R^2	.263	.341		.380	.466	
S.D. Residual	2.7320	2.5841		3.1200	2.8982	
N		1260			514	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 13C: Regression of Education on Characteristics of Civilian, Male Heads of Households Aged 25-64 in 1971, with Earnings, Not in School by Age: PSID

Unstandardized Coefficient (B), (Standard Error) and Zero-Order Correlations (r)

	Age 25-34			Age 35-44			Age 45-54			Age 55-64		
Variable	B (S.E.)	B (S.E.)	r	B (S.E.)	B (S.E.)	r	B (S.E.)	B (S.E.)	r	B (S.E.)	B (S.E.)	r
Respondent White	.716 (.318)	[.440] (.305)	.192	1.146 (.419)	[.397] (.404)	.198	1.341 (.519)	[.497] (.505)	.249	1.597 (.723)	[.678] (.714)	.243
Father's Education	.195 (.035)	.170 (.033)	.383	.252 (.047)	.207 (.045)	.369	.264 (.049)	.206 (.047)	.422	.163 (.071)	.141 (.068)	.264
Father's Occupation	[-.015] (.012)	[-.012] (.011)	.337	[.014] (.016)	[.014] (.015)	.321	[.011] (.017)	[.003] (.016)	.452	[.052] (.028)	[.042] (.027)	.364
White Collar Father	1.670 (.486)	1.441 (.464)	.349	[.785] (.631)	[.713] (.592)	.298	1.937 (.640)	1.738 (.606)	.453	[-.472] (1.082	[-.340] (1.034)	.270
Father Absent	[-1.391] (.801)	[-1.129] (.765)	-.090	[2.566] (2.091)	[2.511] (1.966)	.061	[-3.199] (2.056)	[-2.673] (1.946)	-.042	-3.840 (1.916)	-4.441 (1.834)	-.158
Siblings	[-.173] (.039)	-.150 (.038)	-.306	-.259 (.051)	-.183 (.049)	-.340	-.255 (.054)	-.196 (.051)	-.371	-.168 (.079)	[-.124] (.075)	-.249
Non-Farm Upbringing	[.120] (.248)	[-.254] (.237)	.157	[-.097] (.308)	[-.145] (.290)	.125	[.274] (.338)	[.261] (.320)	.259	1.715 (.462)	1.369 (.447)	.374
Non-South Upbringing	.435 (.221)	[.227] (.212)	.182	[.536] (.304)	[.235] (.287)	.142	1.425 (.317)	1.301 (.301)	.303	.847 (.482)	[.762] (.460)	.264
Age	[.041] (.033)	[.022] (.032)	.025	[-.013] (.045)	[-.048] (.042)	-.029	.018 (.049)	[-.002] (.046)	-.035	-.018 (.069)	[-.012] (.066)	.004
Test Score		.426 (.058)	.408		.596 (.072)	.448		.534 (.075)	.521		.438 (.086)	.440
Constant	9.443	6.304		9.743	6.197		6.384	3.463		6.709	3.764	
R^2	.248	.318		.244	.333		.393	.458		.297	.360	
S.D.Residual	2.258	2.154		2.880	2.708		2.777	2.627		3.188	3.046	
N		545			528			431			270	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 13D: Regression of Education on Characteristics of Civilian, Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School, by Father's Occupation: PSID Complete Data Sample (N = 1774)

Unstandardized Coefficient (B), (Standard ERror) and Zero-Order Correlation (r)

Father's Occupation	White Collar			Blue Collar			Farming		
	B (S.E.)	B (S.E.)	r	B (S.E.)	B (S.E.)	r	B (S.E.)	B (S.E.)	r
Respondent White	[-.241]	[-.695]	-.005	1.124	[.501]	.253	1.363	.860	.205
	(.570)	(.537)		(.336)	(.318)		(.376)	(.376)	
Father's Education	.154	.138	.223	.211	.184	.282	.312	.266	,342
	(.043)	(.041)		(.038)	(.036)		(.045)	(.045)	
Father's Occupation	[-.005]	[-.014]	.095	.032	.026	.146		*	*
	(.014	(.013)		(.012)	(.011)				
Father Absent		*	*	-1.552	01.521	-.069		*	*
				(.730)					
Siblings	[-.120]	[-.100]	-.125	-.302	-.229	-.339	-.191	-.154	-.240
	(.065)	(.061)		(.037)	(.035)		(.046)	(.045)	
Non-South Upbringing	[.037]	[.028]	.000	1.302	.875	.252	.740	.587	.172
	(.346)	(.323)		(.225)	(.213)		(.261)	(.255)	
Age	-.007	[-.010]	-.079	-.032	-.027	-.152	-.096	-.081	-.314
	(.014)	(.013)		(.009)	(.008)		(.011)	(.011)	
Test Score		.569	.369		.555	.470		.363	.399
		(.082)			(.050)			(.064)	
Constant	13.497	8.590		9.738	5.014		12.094	8.664	
R^2	.062	.184		.242	.339		.267	.306	
S.D. Residual	2.590	2.419		2.694	2.516		2.985	2.908	
N	329			862			583		

Coefficients in brackets are less than 1.96 times their standard errors.

*By construction, this variable had no variance within this subsample, so that neither correlations nor regression coefficients could be computed.

Table 13E: Regression of Education on Characteristics of Civilian, Male Heads of Households Aged 25-64 in 1971 With Earnings and Not in School by Test Score: PSID

Unstandardized Coefficient (B), (Standard Error) and Zero-Order Correlation (r).

Test Score	1-9		10-11		12-13	
	B (S.E.)	r	B (S.E.)	r	B (S.E.)	r
Respondent White	.549 (.277)	.213	.825 (.414)	.115	[-.386] (.664)	.031
Father's Education	.195 (.038)	.322	.222 (.036)	.385	[.065] (.052)	.206
Father's Occupation	[.008] (.013)	.283	[.017] (.012)	.358	[-.026] (.017)	.241
White Collar Father	[.831] (.538)	.242	[.679] (.491)	.324	2.082 (.669)	.288
Father Absent	-2.738 (.896)	-.086	[-1.034] (1.129)	-.021	[1.069] (2.443)	.002
Siblings	-.127 (.036)	-.252	-.184 (.040)	-.274	-.262 (.070)	-.273
Non-Farm Upbringing	[.248] (.218)	.187	[.123] (.245)	.168	[.271] (.443)	.140
Non-Southern Upbringing	.528 (.221)	.233	.717 (.242)	.131	[.544] (.350)	.109
Age	-.052 (.009)	-.281	-.030 (.009)	-.194	[-.019] (.015)	-.088
Test Score	.456 (.069)	.345	[.090] (.199)	.082	1.041 (.336)	.179
Constant	6.796		9.409		1.895	
R^2	.295		.251		.181	
S.D. of Residual	2.651		2.611		2.618	
N	764		707		303	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 14A: Regression of Occupation on Characteristics of Civilian, Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School. PSID Complete Data Sample (N = 1774)

Independent Variable	Zero Order Correlation	Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Errors) for Selected Equations							
		Equation 2		Equation 4		Equation 6		Equation 7	
		B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
Respondent White	.191	8.6524 (1.5991)	.126	6.2908 (1.5862)	.092	5.3000 (1.3304)	.077	5.2982 (1.3392)	.077
Father's Education	.282	1.1907 (.1675)	.180	.9580 (.1631)	.145	[.2680] (.1400)	.041	[.2684] (.1406)	.041
Father's Occupation	.290	.0228 (.0570)	.020	[.0155] (.0551)	.013	[.0289] (.0463)	.025	[.0296] (.0463)	.025
Father White Collar	.275	6.5966 (2.2884)	.131	5.4568 (2.2134)	.109	[-.3652] (1.8691)	-.007	[-.3714] (1.8704)	-.007
Father Foreign	.048	2.6819 (1.3113)	.047	[1.6848] (1.2700)	.029	[-.7599] (1.0724)	-.013	[-.7656] (1.0851)	-.013
Father Absent	-.021	[-4.7545] (5.0808)	-.021	[-3.7628] (4.9096)	-.016	[.7419] (4.1250)	.003	[.8195] (4.1296)	.004
Siblings	-.240	-.8797 (.1827)	-.113	-.6052 (.1782)	-.078	[.0042] (.1514)	.001	[.0096] (.1517)	.001
Non-Farm	.197	2.8314 (1.1534)	.062	[1.7899] (1.1180)	.039	1.8817 (.9387)	.041	1.8776 (.9406)	.041
Non-South Upbringing	.132	[.9860] (1.0995)	.022	[.3923] (1.0692)	.009	[-.0430] (.9066)	-.001	[-.0398] (.9071)	-.001
Father's Occupation^{2} *	-.082	-.0042 (.0014)	-.067	-.0047 (.0014)	-.075	-.0036 (.0012)	-.057	-.0036 (.0012)	-.057
Siblings^{2} *	.054	[.1207] (.0645)	.041	[.1108] (.0623)	.038	[.0061] (.0526)	.002	[.0016] (.0528)	.001
Test Score	.358			2.5633 (.2493)	.238	.7611 (.2230)	.071	.7565 (.2232)	.070
Test Score^{2} *	.111			.3457 (.0738)	.100	.2116 (.0630)	.061	.2154 (.0633)	.063
Years of Education	.618					1.4656 (.2179)	.232	1.4223 (.2301)	.225
Years of Higher Education	.625					3.3175 (.5794)	.295	3.3455 (.5813)	.298
College Graduation	.566					5.5930 (2.1677)	.103	5.6188 (2.1691)	.103
Vocational	-.073					2.4944 (.9217)	.050	2.5243 (.9236)	.051
Experience	-.259							[-.0269] (.0397)	-.015
Job Tenure	-.052							[.0434] (.0437)	.020
Constant		18.3213		23.3939		13.6936		14.5786	
R^2		.169		.226		.458		.458	
S.D. Residual		19.2619		18.6061		15.5911		15.5953	

In regression (4), all interactions between Resp.White, Father's Ed., Father's Oc., Father Absent, Siblings & Test Score were considered after other variables had been entered. None was found to increase R^2 significantly (0.05 level, 2-tailed).

In regression (7), interactions involving all of the above variables, as well as interactions involving Years of Ed. and Experience were considered after other variables had been entered. None was found to be significant.

Table 14A: Regression of Occupation on Characteristics of Civilian, Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Footnotes:

*All squared terms are constructed so as to be uncorrelated with the linear term. Table 19 gives detailed definitions for these variables.

Coefficients in brackets are less than 1.96 times their standard errors.

Table 14A: Regression of Occupation on Characteristics of Civilian, Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Errors) for Selected Equations

Independent Variable	Equation 6' B (S.E.)	Equation 6' Beta	Equation 7' B (S.E.)	Equation 7' Beta
Respondent White	5.5972 (1.3111)	.082	5.5641 (1.3188)	.081
Father's Education	.3053 (.1406)	.046	.3077 (.1412)	.047
Father's Occupation	[.0301] (.0466)	.026	[.0308] (.0466)	.026
Father White Collar	[-.1961] (1.8800)	-.004	[-.2077] (1.8814)	-.004
Father Foreign	[-.5237] (1.0775)	.009	[-.5521] (1.0905)	-.010
Father Absent	[.5158] (4.1488)	.002	[.5987] (4.1538)	.003
Siblings	[-.0450] (.1519)	-.006	[-.0412] (.1522)	-.005
Non-Farm	2.2330 (.9415)	.049	2.2391 (.9433)	.049
Non-South Upbringing	[-.0355] (.9101)	-.001	[-.0383] (.9106)	-.001
Father's Occupation^2*	-.0033 (.0012)	-.053	-.0033 (.0012)	-.053
Siblings^2	[.0064] (.0529)	.002	[.0028] (.0531)	.001
Test Score				
Test Score^2*				
Years of Education	1.5365 (.2107)	.243	1.5055 (.2247)	.238
Years of Higher Education	3.5636 (.5785)	.317	3.5858 (.5810)	.319

D12c

Table 14A: Regression of Occupation on Characteristics of Civilian, Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Errors) for Selected Equations

Independent Variable	Equation 6'		Equation 7'	
	B (S.E.)	Beta	B (S.E.)	Beta
College	5.3852	.099	5.4154	.100
	(2.1802)		(2.1818)	
Vocational	2.6081	.053	2.6392	.053
	(.9249		(.9270)	
Experience			[-.0190]	-.011
			(.0398)	
Job Tenure			[.0395]	.018
			(.0440)	
Constant	10.4692		3.7670	
R^2	.450		.451	
S.D. Residual	15.6852		15.6905	

Footnotes:

*All squared terms are constructed so as to be uncorrelated with the linear term. Table 19 gives detailed definitions for these variables.

Coefficients in brackets are less than 1.96 times their standard errors.

Table 14B: Regression of Occupation on Characteristics of Civilian Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School, by Race: PSID Complete Data Sample (N = 1774)

Unstandardized Coefficient (B), (and Standard Error) and Zero-Order Correlation (r)

	White		Non-White	
	B (S.E.)	r	B (S.E.)	r
Father's Education	[.2296] (.1683)	.262	[-.1110] (.2285)	.333
Father's Occupation	[.0334] (.0565)	.269	[-.0472] (.0798)	.385
Father White Collar	[-.6666] (2.2192)	.257	[4.5908] (4.0472)	.415
Father Absent	[2.0129] (5.8482)	.007	[1.5380] (3.6027)	-.071
Non-Farm Upbringing	2.6565 (1.1343)	.196	2.7909 (1.3670)	.159
Non-South Upbringing	[-.4993] (1.0713)	.064	[.9070] (1.5888)	.274
Siblings	[-.0290] (.1880)	-.227	[.1633] (.2163)	-.068
Test Score	.9098 (.2861)	.334	[.0307] (.2650)	.299
Years of Education	1.4758 (.2974)	.603	1.4728 (.2733)	.630
Years of Higher Education	3.3786 (.7028)	.616	[1.1155] (1.0848)	.670
College Graduation	5.1294 (2.5517)	.556	25.1656 (5.2973)	.652
Vocational Training	2.6190 (1.1112)	-.087	[.8129] (1.5898)	-.007
Experience	[.0037] (.0432)	-.258	[-.0556] (.0631)	-.280
Experience^{2}*	[.0007] (.0032)	-.004	[.0015] (.0043)	-.043
Constant	5.3179		11.553	
R^2	.424		.536	
S.D. Residual	15.9376		13.0812	
N	1260		514	

Coefficients in brackets are less than 1.96 times their standard errors.

*Experience^{2} is constructed so as to be uncorrleated with experience in the complete data sample. Table 19 gives its detilaed definition

Table 14C: Regression of Occupation on Characteristics of Civilian, Male Heads of Households Aged 25-64 in 1971, With Earnings and Not in School, by Age: PSID Complete-Data Sample (N = 1774)

Unstandardized Coefficient (B), (Standard Error) and Zero-Order Correlations (r)

Age	25-34		35-44		45-54		55-64	
Variable	B (S.E.)	r	B (S.E.)	r	B (S.E.)	r	B (S.E.)	r
Respondent White	5.250 (2.285)	.195	5.551 (2.379)	.204	7.387 (2.861)	.212	[4.818] (3.794)	.158
Father's Education	[.038] (.254)	.278	[.359] (.267)	.288	[.419] (.273)	.335	[.027] (.370)	.146
Father's Occupation	[.081] (.083]	.275	[-.002] (.087)	.253	[.022] (.090)	.378	[.031] (.143)	.225
White Collar Father	[-1.361] (3.514)	.270	[1.129] (3.512)	.249	[-1.385] (3.473)	.362	[-1.561] (5.460)	.166
Father Absent	[10.710] (5.730)	.005	[-17.944] (11.553)	.008	[-5.988] (11.018)	-.033	[-10.912] (9.789)	-.107
Siblings	.634 (.286)	-.157	[-.196] (.289)	-.261	[-.470] (.296)	-.302	[-.342] (.398)	-.179
Non-Farm Upbringing	[2.806] (1.780)	.169	[2.076] (1.695)	.146	[2.552] (1.816)	.219	[2.140] (2.392)	.254
Non-South Upbringing	[.658] (1.600)	.150	[1.588] (1.688)	.144	[-3.153] (1.745)	.113	[-1.673] (2.529)	.092
Test Score	1.379 (.455)	.353	[.315] (.456)	.326	[.609] (.447)	.399	[.626] (.476)	.328
Years of Education	2.561 (.656)	.616	1.832 (.489)	.638	1.519 (.440)	.633	[.751] (.537)	.567
Years of Higher Ed.	2.557 (1.177)	.602	2.518 (1.085)	.654	4.275 (1.125)	.634	[2.909] (1.582)	.554
College Graduation	[4.161] (3.682)	.530	10.655 (4.147)	.623	[2.205] (4.438)	.564	[6.494] (6.661)	.478
Vocational Training	[.870] (1.732)	-.099	[.890] (1.705)	-.137	4.689 (1.784)	-.040	[2.945] (2.714)	.024
Experience	[.068] (.239)	-.391	[.414] (.243)	-.436	[.334] (.258)	-.465	-.851 (.341)	-.510
Constant	-20.648		-7.558		-8.974		51.151	
R^2	.432		.484		.488		.405	
S.D. Residual	16.090		15.813		14.766		15.964	
N	545		528		431		270	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 14D: Regression of Occupation on Characteristics of Civilian Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School, by Father's Occupation: PSID Complete Data Sample (N = 1774)

Unstandardized Coefficient (B), (Standard Error) and Zero-Order Correlations (r)

Father's Occupation	White Collar		Blue Collar		Farm	
	B (S.E.)	r	B (S.E.)	r	B (S.E.)	r
Respondent White	[2.3041] (3.3117)	.062	5.6370 (2.0247)	.226	4.1326 (2.0221)	.174
Father's Education	[.0942] (.2565)	.128	.4773 (.2330)	.224	[.2191] (.2492)	.222
Father's Occupation	[-.1102] (.0803)	.013	[.1229] (.0726)	.122	**	
Father Absent	**		[.4197] (4.3445)	-.022	**	
Siblings	[-.3021] (.3779)	-.131	[-.1314] (.2266)	-.235	[.4071] (.2416)	-.099
Non-South Upbringing	[-1.8311] (1.9882)	-.036	[.5070] (1.3859)	.151	[-.3297] (1.3785)	.082
Test Score	1.8578 (.5442)	.365	.7737 (.3373)	.328	[.1932] (.3551)	.255
Years of Education	2.9656 (.9095)	.624	1.2481 (.3385)	.576	1.2853 (.3387)	.548
Years of Higher Ed.	[.3972] (1.4029)	.594	3.8316 (.8784)	.590	4.4460 (1.0886)	.611
College Graduation	[4.7759] (3.8109)	.547	[6.5730] (3.4215)	.529	9.0902 (4.4838)	.564
Vocational Training	[1.2058] (2.1244)	-.192	[1.8858] (1.2962)	-.069	4.5861 (1.7009)	-.013
Experience	[-.1162] (.0887)	-.217	[-.0253] (.0548)	-.214	[.1157] (.0653)	-.205
Experience^{2*}	[-.0051] (.0065)	-.010	[-.0003] (.0042)	.030	[-.0013] (.0044)	-.070
Constant	-7.7256		1.5186		2.6559	
R^2	.428		.410		.419	
S.D. Residual	14.7395		15.9468		15.4941	
N	329		862		583	

Coefficients in brackets are less than 1.96 times their standard errors.

*Experience^2 is constructed so as to be uncorrelated with Experience in the complete data sample. Table 19 gives its detailed definition.

**By construction, these variables have no variance within these subsamples.

Table 14E: Regression of Occupation on Characteristics of Civilian, Male Heads of Households Males Aged 25-64 in 1971, With Earnings and Not in School, by Test Score: PSID Complete-Data Sample (N = 1774)

Unstandardized Coefficient (B), (Standard Error) and Zero-Order Correlation (r)

Test Score	1-9 B (S.E.)	r	10-11 B (S.E.)	r	12-13 B (S.E.)	r
Respondent White	6.9121 (1.5511)	.211	[4.5220] (2.5865)	.118	[5.9254] (3.9684)	.087
Father's Education	[.0467] (.2195)	.175	.5586 (.2299)	.307	[-.3196] (.3100)	.115
Father's Occupation	[-.0072] (.0734)	.169	[.0633] (.0768)	.257	[-.0544] (.1012)	.226
White Collar Father	[.3603] (2.9997)	.148	[-3.8786] (3.0799)	.219	[5.9086] (4.0452)	.270
Father Absent	[5.4419] (5.0072)	-.022	[-7.5295] [7.0378)	-.031	[26.2331] (14.6000)	.072
Siblings	[.0301] (.2020)	-.141	[-.1017] (.2551)	-.194	[.0114] (.4275)	-.178
Non-Farm Upbringing	[2.1402] (1.2197)	.135	[1.8843] (1.5248)	.131	5.2220 (2.6541)	.191
Non-Southern Upbringing	[-1.0295] (1.2520)	.118	[-.0418] (1.5320)	.065	[1.2924] (2.1119)	.086
Test Score	[-.4218] (.4030)	.153	3.9060 (1.2438)	.162	6.0898 (2.0403)	.241
Years of Education	1.5886 (.2702)	.481	1.4891 (.4271)	.585	1.7437 (.8301)	.622
Years of Higher Education	2.2843 (1.0438)	.445	3.0502 (.9563)	.610	[2.6641] (1.4021)	.625
College Graduation	12.2454 (4.6071)	.401	8.4817 (3.3652)	.557	[2.6990] (4.3959)	.560
Vocational Training	3.0436 (1.3151)	.07	2.9991 (1.4944)	.097	[.8097] (2.4798)	-.210
Experience	[.0032] (.0535)	-.208	[.0108] (.0593)	-.220	[-.0684] (.0980)	-.224
Experience^2*	[-.0025] (.0040)	-.032	[.0020] (.0044)	.003	[.0012] (.0072)	.060
Constant	9.1169		-33.2617		-61.1587	
R^2	.301		.422		.456	
S.D. Residual	14.7157		16.2398		15.5335	
N	764		707		303	

Coefficients in brackets are less than 1.96 times their standard errors.

* Experience^2 is constructed so as to be uncorrelated with Experience in the complete-data sample. Table 19 gives its deatiled definition.

Table 15A: Regression of Annual Earnings on Characteristics of Civilian, Male Heads of Households Aged 25-64 in 1971 with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Independent Variable	Zero-Order Correlation	Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error) for Selected Equations					
		Equation 2		Equation 4		Equation 5	
		B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
Respondent White	.148	2383.81 (607.22)	.095	1366.88 (603.30)	.054	1231.79 (602.86)	.049
Father's Education	.174	262.33 (63.61)	.108	175.62 (62.04)	.072	173.00 (62.08)	.071
Father's Occupation	.185	-47.25 (21.66)	-.111	-50.48 (20.96)	-.118	-42.41 (21.07)	-.099
Father White Collar	.192	3272.56 (868.94)	.177	2878.36 (841.83)	.156	2513.44 (846.02)	.136
Father Foreign	.107	1850.37 (497.84)	.088	1495.62 (482.93)	.071	1432.13 (482.27)	.068
Father Absent	-.024	[-1733.10] (1929.87)	-.020	[-1416.15] 1867.89	-.017	[-1440.87] (1863.68)	-.017
Siblings	-.189	-277.45 (69.36)	-.097	-173.12 (67.78)	-.061	-156.39 (67.74)	-.055
Non-Farm Upbringing	.195	1793.81 (437.94)	.108	1417.47 (425.20)	.085	1471.19 (424.35)	.088
Non-South Upbringing	.162	1046.40 (417.53)	.062	[772.31] (406.66)	.046	[733.66] (405.65)	.044
Father Occupation^{2*}	-.064	[-.65] (.55)	-.028	[-.80] (.53)	-.035	[-.13] (.62)	-.006
Siblings^{2*}	.053	55.20 (24.48)	.051	52.38 (23.69)	.048	[44.45] (24.35)	.041
Test Score	.337			996.68 (94.81)	.252	995.21 (95.10)	.252
Test Score^{2*}	.081			93.85 (28.06)	.074	89.56 (27.99)	.071
Father's Occ. x Sibs*	-.026					[-3.91] (4.28)	-.023
Fath. Occ. x Fath. Ed.*	-.116					-8.34 (2.99)	-.075
White x Siblings*	.005					[259.61] (197.23)	.029
Siblings x Father Ed.*	-.057					-54.46 (23.64)	-.058
Years of Education	.446						
Years of Higher Education	.429						
College Graduation	.396						
Vocational Training	-.041						
Experience	-.127						
Experience^{2*}	-.186						
Job Tenure	.112						
Ed. x Test Score*	.131						

Table 15A: Regression of Annual Earnings on Characteristics of Civilian, Male Heads of Households Aged 25-64 in 1971 with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Independent Variable	Zero-Order Correlation	Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error) for Selected Equations					
		Equation 2		Equation 4		Equation 5	
		B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
Ed. x Father's Ed.*	.060						
Exper. x Test Score*	-.002						
Coll. Grad. x Exper.*	.131						
Constant		6638.79		5624.80		2462.84	
R^2		.110		.168		.176	
S.D. of Residual		7313.76		7076.34		7051.84	

Table 15A: Regression of Annual Earnings on Characteristics of Civilian, Male Heads of Households Aged 25-64 in 1971 with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error) for Selected Equations

Independent Variable	Equation 6		Equation 7		Equation 8	
	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
Respondent White	[950.53] (569.28)	.038	[811.32] (556.66)	.032	[961.95] (555.27)	.038
Father's Education	[16.36] (59.87)	.007	[90.78] (58.61)	.037	115.31 (58.69)	.048
Father's Occupation	[-38.39] (19.92)	-.090	[-32.46] (19.32)	-.076	[-36.33] (19.26)	-.085
Father White Collar	[1161.49] (804.72)	.063	[1020.47] (780.71)	.055	[973.78] (777.05)	.053
Father Foreign	908.22 (458.46)	.043	[407.27] (450.07)	.019	[473.02] (448.40)	.022
Father Absent	[-411.14] (1762.27)	-.005	[154.57] (1709.85)	.002	[164.97] (1704.97)	.002
Siblings	[-11.88] (64.78)	-.004	[-8.31] (62.87)	-.003	[2.24] (62.75)	.001
Non-Farm Upbringing	1485.56 (401.17)	.089	1416.03 (390.50)	.085	1401.52 (388.58)	.084
Non-South Upbringing	[591.39] (387.10)	.035	[539.77] (375.39)	.032	[589.83] (374.73)	.035
Father Occupation^{2*}	[.09] (.59)	.004	[.06] (.57)	.002	[.01] (.57)	.000
Siblings^{2*}	[23.57] (23.10)	.022	[16.50] (22.48)	.015	[24.77] (22.47)	.023
Test Score	581.12 (95.39)	.147	536.91 (92.72)	.136	528.60 (92.29)	.134
Test Score^{2*}	62.84 (26.94)	.050	72.08 (26.25)	.057	[27.04] (33.38)	.021
Father's Occupation x Sibs*	[-7.27] (4.04)	-.043	-7.94 (3.93)	-.047	-9.30 (3.93)	-.055
Father Occupation x Father Ed.*	-7.89 (2.83)	-.070	-7.64 (2.75)	-.068	-9.20 (2.89)	-.082
White x Siblings	386.97 (186.48)	.043	412.98 (180.93)	.046	487.63 (180.95)	.055
Siblings x Father Education*	-43.38 (22.34)	-.047	-44.58 (21.67)	-.048	[-34.11] (22.33)	-.037
Years Education	423.24 (93.70)	.182	362.78 (96.92)	.156	512.68 (108.83)	.221
Years of Higher Education	[353.94] (247.53)	.086	530.33 (242.18)	.129	[165.15] (261.06)	.040
College Graduation	2716.21 (925.36)	.136	2607.00 (898.44)	.131	2734.84 (895.62)	.137
Vocational Training	[575.71] (393.90)	.032	[623.11] (383.10)	.034	[690.12] (382.13)	.038
Experience			[5.08] (16.49)	.008	[6.92] (16.50)	.011
Experience^{2*}			-8.01 (1.09)	-.151	-6.40 (1.19)	-.121
Job Tenure			114.86 (18.16)	.141	112.09 (18.11)	.138
Education x Test Score					98.56 (32.03)	.097

Table 15A: Regression of Annual Earnings on Characteristics of Civilian, Male Heads of Households Aged 25-64 in 1971 with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error) for Selected Equations

Independent Variable	Equation 6		Equation 7		Equation 8	
	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
Education x Father's Education*					[34.76] (17.93)	.049
Experience x Test Score*					[11.96] (7.91)	.038
College Graduation x Experience*					113.55 (44.59)	.057
Constant	535.25		-3331.49		9502.35	
R^2	.268		.313		.322	
S.D. of Residual	6651.73		6448.42		6416.38	

*Squared terms have been constructed so as to be uncorrelated with the corresponding linear variable. Multiplicative interactions have been constructed similarly so that they are uncorrelated with their components. Table 19 gives the detailed definitions of these variables.

In regression (5), all interactions between Respondent White, Father's Education, Father's Occupation, Father Absent, Siblings, and Test Score were considered after other variables had been entered. Interactions were added in the order of their significance, until no remaining interaction increased R^2 significantly. However, interactions which would prove significant in later regressions (8) were also included.

In regression (8), interactions involving Years of Education, Experience and the above variables were considered. Interactions were added in order of significance until no remaining interaction increased R^2 significantly.

Coefficients in brackets are less than 1.96 times their standard errors.

Table 15B: Regression of Annual Earnings on Characteristics of Civilian Male Heads of Households, Aged 25-64 in 1971 with Positive Earnings and Not in School, by Race: PSID Complete Data Sample (N = 1774)

Unstandardized Coefficient (B), (Standard Error) and Zero-Order Correlation (r)

	White		Non-White	
	B (S.E.)	r	B (S.E.)	r
Father's Education	[65.8] (69.7)	.156	[88.2] (109.6)	.209
Father's Occupation	[-39.7] (23.4)	.167	[-68.1] (38.3)	.242
Father White Collar	[1391.2] (919.0)	.178	[2400.4] (1941.5)	.278
Father Absent	[-361.5] (2421.8)	-.006	[-290.4] (1728.3)	-.047
Non-Farm Upbringing	1551.8 (469.7)	.194	[722.6] (655.8)	.161
Non-South Upbringing	[589.0] (443.6)	.113	[1000.4] (762.1)	.256
Siblings	[18.6] (77.9)	-.161	-367.9 (103.8)	-.193
Test Score	600.0 (118.5)	.318	359.3 (127.1)	.304
Years of Education	416.3 (123.2)	.431	[252.7] (131.1)	.432
Years of Higher Education	[559.0] (291.0)	.415	[651.6] (520.4)	.482
College Graduation	2186.3 (1056.7)	.383	6385.9 (2541.1)	.475
Vocational Training	[429.1] (460.2)	-.051	[56.9] (762.6)	-.001
Experience	44.5 (17.9)	-.120	[45.2] (30.3)	-.170
Experience^{2*}	-8.6 (1.3)	-.189	-8.6 (2.1)	-.175
Constant	-6834.0		-1605.0	
R^2	.264		.337	
S.D. Residual	6599.9321		6275.1	
N	1260		514	

Coefficients in brackets are less than 1.96 times their standard errors.

*Experience2 is constructed so as to be uncorrelated with Experience in the complete data sample. Table 19 gives its detailed definition.

Table 16A: Regression of Ln Earnings on Characteristics of Civilian Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Independent Variable	Zero-Order Correlation	Equation 2 B (S.E.)	Equation 2 Beta	Equation 4 B (S.E.)	Equation 4 Beta	Equation 5 B (S.E.)	Equation 5 Beta
		Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error) for Selected Equations					
Respondent White	.200	.35775 (.05890)	.146	.23371 (.05819)	.095	.22677 (.05808)	.092
Father's Education	.175	.02423 (.00622)	.103	.01668 (.00606)	.071	.01671 (.00605)	.071
Father's Occupation	.179	[-.00222] (.00213)	-.053	[-.00274] (.00206)	-.066	[-.00232] (.00206)	-.056
Father White Collar	.173	.21004 (.08435)	.117	.18313 (.08173)	.102	[.15628] (.08203)	.087
Father Foreign	.096	.16343 (.04833)	.080	.13492 (.04688)	.066	.12701 (.04689)	.062
Father Absent	-.020	[-.10949] (.18737)	-.013	[-.09081] (.18149)	-.011	[-.08586] (.18140)	-.010
Siblings	-.196	-.02655 (.00673)	-.095	-.01670 (.00658)	-.060	-.01543 (.00658)	-.055
Non-Farm Upbringing	.195	.17518 (.04245)	.108	.14401 (.04122)	.089	.14804 (.04118)	.091
Non-South Upbringing	.171	.09055 (.04067)	.055	[.05443] (.03954)	.033	[.05359] (.03947)	.033
Father's Education^{2*}	-.047	[-.00164] (.00117)	-.034	[-.00126] (.00114)	-.026	[-.00048] (.00139)	-.010
Father Occupation^{2*}	-.066	[-.00003] (.00006)	-.011	[-.00004] (.00005)	-.017	[.00002] (.00006)	.010
Test Score	.353			.09976 (.00921)	.259	.09921 (.00921)	.257
Fath. Occ. x Fath. Ed.*	-.118					-.00076 (.00034)	-.070
White x Siblings*	.011					[.02347] (.01893)	.027
Siblings x Father Ed.*	-.038					-.00534 (.00208)	-.059
Constant		8.36175		7.59485		7.43313	
R^2		.117		.172		.178	
S.D. of Residual		.70943		.68711		.68537	

Table 16A: Regression of Ln Earnings on Characteristics of Civilian, Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Independent Variable	Zero-Order Correlation	Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error) for Selected Equations					
		Equation 6		Equation 7		Equation 7a	
		B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
Respondent White		.19892 (.05547)	.081	.23121 (.05421)	.094	.21197 (.05302)	.086
Father's Education		[.00190] (.00590)	.008	[.00789] (.00578)	.033	[.00898] (.00565)	.038
Father's Occupation		[-.00259] (.00197)	-.062	[-.00233] (.00191)	-.056	[-.00213] (.00187)	-.051
Father White Collar		[.06845] (.07888)	.038	[.07369] (.07664)	.041	[.06625] (.07491)	.037
Father Foreign		.09889 (.04507)	.048	.08937 (.04428)	.044	[.07191] (.04332)	.035
Father Absent		[.03741] (.17335)	.005	[.04119] (.16841)	.005	[.08418] (.16466)	.010
Siblings		[-.00234] (.00636)	-.008	[-.00145] (.00618)	-.005	[-.00039] (.00604)	-.001
Non-Farm Upbringing		.14037 (.03932)	.087	.11348 (.03831)	.070	.12135 (.03745)	.075
Non-South Upbringing		[.01519] (.03811)	.009	[.01475] (.03702)	.009	[.01420] (.03618)	.009
Father's Education^{2*}		[-.00085] (.00133)	-.017	[-.00051] (.00129)	-.010	[-.00027] (.00126)	-.006
Father's Occupation^{2*}		[.00005] (.00006)	.024	[.00004] (.00006)	.018	[.00004] (.00005)	.018
Test Score		.05781 (.00936)	.150	.05144 (.00911)	.134	.05092 (.00890)	.132
Fath. Occ. x Fath. Ed.*		[-.00058] (.00032)	-.053	[-.00054] (.00031)	-.049	[-.00057] (.00031)	-.052
White x Siblings*		.03859 (.01809	.045	.04102 (.01757)	.047	.04013 (.01717)	.046
Siblings x Father Ed.*		-.00577 (.00199)	-.064	-.00521 (.00194)	-.057	-.00499 (.00190)	-.055
Years of Education	.443	.06938 (.00910)	.307	.05044 (.00942)	.223	.04324 (.00924)	.191
Years of Higher Ed.	.355	[-.02615] (.02408)	-.065	[.00496] (.02362)	.012	[.00836] (.02309)	.021
College Graduation	.323	.24372 (.09090)	.125	.20019 (.08838)	.103	.21861 (.08640)	.112
Vocational Training	.029	.11997 (.03862)	.068	.10037 (.03758)	.057	.11728 (.03677)	.066
Experience	-.221			[-.00273] (.00147)	-.043	-.00853 (.00157)	-.135
Experience^{2*}				-.00110 (.00011)	-.213	-.00102 (.00010)	-.197
Job Tenure						.01589 (.00174)	.200
Experience x Father Absent*							
Experience x Father Ed.*							
Occupation							

Table 16A: Regression of Ln Earnings on Characteristics of Civilian, Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Independent Variable	Equation 6 B (S.E.)	Equation 6 Beta	Equation 7 B (S.E.)	Equation 7 Beta	Equation 7a B (S.E.)	Equation 7a Beta
Ln Weeks Worked						
Constant	7.26057		7.06074		7.61545	
R^2	.255		.298		.330	
S.D. of Residual	.65338		.63447		.62008	

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error) for Selected Equations

Table 16A: Regression of Ln Earnings on Characteristics of Civilian, Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Independent Variable	Zero-Order Correlation	Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error) for Selected Equations	
		Equation 8	
		B (S.E.)	Beta
Respondent White		.21461 (.05304)	.088
Father's Education		[.00912] (.00564)	.039
Father's Occupation		[-.00236] (.00186)	-.057
Father White Collar		[.07221] (.07472)	.040
Father Foreign		[.06831] (.04326)	.033
Father Absent		[.09749] (.16424)	.012
Siblings		[.00113] (.00604)	.004
Non-Farm Upbringing		.12424 (.03739)	.077
Non-South Upbringing		[.00572] (.03618)	.003
Father's Education^{2*}		[-.00072] (.00127)	-.015
Father's Occupation^{2*}		[.00004] (.00005)	.019
Test Score		.05085 (.00888)	.132
Fath. Occ. x Fath. Ed.*		-.00061 (.00031)	-.056
White x Siblings*		[.03753] (.01714)	.043
Siblings x Father Ed.*		-.00390 (.00193)	-.043
Years of Education		.04754 (.00930)	.210
Years of Higher Ed.		[.00529] (.02304)	.013
College Graduation		.20213 (.08634)	.104
Vocational Training		.11321 (.03669)	.064
Experience		-.00834 (.00157)	-.132
Experience^{2*}		-.00109 (.00011)	-.212
Job Tenure		.01590 (.00174)	.200
Experience x Father Absent*		.02799 (.01287)	.043
Experience x Father Ed.*		-.00116 (.00043)	-.060
Occupation			

Table 16A: Regression of Ln Earnings on Characteristics of Civilian, Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Independent Variable	Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error) for Selected Equations	
	Equation 8	
	B (S.E.)	Beta
Ln Weeks Worked		
Constant	6.82684	
R^2	.334	
S.D. of Residual	.61833	

Table 16A: **Regression of Ln Earnings on Characteristics of Civilian Male Heads of Households Aged** 25-64 in 1971, with Earnings and Not in School: PSID Complete Data **Sample (N = 1774)**

Independent Variable	Zero-Order Correlation	Equation 9 B (S.E.)	Equation 9 Beta	Equation 10 B (S.E.)	Equation 10 Beta	Equation 11 B (S.E.)	Equation 11 Beta
		Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error) for Selected Equations					
Respondent White		.14023 (.04412)	.057	.18460 (.05245)	.075	.11974 (.04377)	.049
Father's Education		[.00675] (.00469)	.029	[.00730] (.00557)	.031	[.00547] (.00464)	.023
Father's Occupation		[-.00052] (.00155)	-.012	[-.00266] (.00184)	-.064	[-.00077] (.00153)	-.018
Father White Collar		[-.00095] (.06210)	-.001	[.07614] (.07366)	.042	[.00328] (.06143)	.002
Father Foreign		[.06799] (.03592)	.033	[.07313] (.04264)	.036	.07150 (.03553)	.035
Father Absent		[.03269] (.13640)	.004	[.09690] (.16190)	.012	[.03347] (.13492)	.004
Siblings		[.00620] (.00502)	.022	[.00120] (.00595)	.004	[.00616] (.00496)	.022
Non-Farm Upbringing		.13645 (.03105)	.084	.11026 (.03691)	.068	.12604 (.03076)	.078
Non-South Upbringing		[.05106] (.03008)	.031	[.00760] (.03566)	.005	[.05158] (.02976)	.031
Father's Ed.^{2*}		[.00037] (.00106)	.008	[-.00044] (.00125)	-.009	[.00056] (.00105)	.011
Father Occupation^{2*}		[-.00000] (.00005)	-.000	[.00006] (.00005)	.027	[.00001] (.00004)	.007
Test Score		.04061 (.00738)	.105	.04564 (.00878)	.118	.03700 (.00733)	.096
Fath. Occ. x Fath. Ed.*		-.00058 (.00025)	-.053	-.00059 (.00030)	-.054	-.00056 (.00025)	-.052
White x Siblings*		[.01853] (.01425)	.021	.03771 (.01690)	.044	[.01902] (.01410)	.022
Siblings x Father Ed.*		-.00355 (.00161)	-.039	[-.00335] (.00191)	-.037	-.00315 (.00159)	-.035
Years of Education		.04675 (.00772)	.207	.03868 (.00925)	.171	.04031 (.00771)	.178
Years of Higher Ed.		[-.00234] (.01914)	-.006	[-.01863] (.02296)	-.046	[-.01964] (.01913)	-.049
College Graduation		.20415 (.07169)	.105	[.16324] (.08523)	.084	.17576 (.07106)	.090
Vocational Training		.07124 (.03050)	.040	.09624 (.03624)	.054	.05966 (.03023)	.034
Experience		[-.00236] (.00132)	-.037	-.00828 (.00155)	-.131	[-.00242] (.00131)	-.038
Experience^2	-.249	-.00080 (.00009)	-.156	-.00110 (.00011)	-.213	-.00081 (.00009)	-.157
Job Tenure	.126	.00829 (.00147)	.104	.01565 (.00171)	.197	.00825 (.00145)	.104
Exper. x No Father*	.031	[.02021] (.01069)	.031	.03155 (.01270)	.048	.02296 (.01059)	.035
Exper. x Father Ed.*	.020	-.00073 (.00036)	-.038	-.00116 (.00043)	-.060	-.00073 (.00035)	-.038
Occupation	.408			.00671 (.00093)	.188	.00489 (.00078)	.137

Table 16A: Regression of Ln Earnings on Characteristics of Civilian Male Heads of Households Age 25-64 in 1971 with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

		Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error) for Selected Equations					
Independent Variable	Zero-Order Correlation	Equation 9		Equation 10		Equation 11	
		B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
Ln Weeks Worked	.578	1.03058 (.03670)	.479			1.01134 (.03643)	.470
Constant		3.11967		6.87550		3.22435	
R^2		.541		.353		.551	
S.D. of Residual		.51344		.60953		.50789	

Table 16A: Regression of Ln Earnings on Characteristics of Civilian Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error) for Selected Equations

Independent Variable	Equation 6'		Equation 7'		Equation 8'		Equation 9'	
	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
Fath. Occ. x Fath. Ed.*	-.00064 (.00032)	-.059	[-.00059] (.00032)	-.054	-.00067 (.00031)	-.061	-.00062 (.00026)	-.057
White x Siblings*	[.03517] (.01827)	.041	.03805 (.01772)	.044	.03465 (.01729)	.040	.01606 (.01436)	.019
Siblings x Father Ed.*	-.00590 (.00210)	-.065	-.00530 (.00196)	-.058	-.00403 (.00195)	-.044	-.00365 (.00162)	-.040
Years of Education	.08238 (.00894)	.364	.06106 (.00931)	.270	.05796 (.00920)	.256	.05504 (.00764)	.244
Years of Higher Education	[-.02561] (.02434	-.064	[.00668] (.02383)	.017	[.00695] (.02325)	.017	[-.00190] (.01929)	-.003
College Graduation	.23570 (.09184)	.121	.19138 (.08914)	.098	.19415 (.08711)	.100	.19781 (.07228)	.102
Vocational Training	.13503 (.03895)	.076	.11289 (.03784	.064	.12570 (.03695)	.071	.08078 (.03070)	.046
Experience			-.00293 (.00148)	-.046	-.00858 (.00158)	-.136	[-.00249] (.00133)	-.039
Experience^2			-.00114 (.00011)	-.221	-.00113 (.00011)	-.216	.00083 (.00009)	-.160
Job Tenure					.01597 (.00175)	.201	.00827 (.00148)	.104
Exper. x No Father*					.03035 (.01298)	.046	.02202 (.01087)	.034
Exper. x Father Ed.*					-.00111 (.00044)	-.057	[-.00068] (.00036)	-.035

Table 16A: Regression of Ln Earnings on Characteristics of Civilian Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error) for Selected Equations

Independent Variable	Equation 6'		Equation 7'		Equation 8'		Equation 9'	
	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
Respondent White	.25728 (.05523)	.105	.28448 (.05385)	.116	.26805 (.05269)	.109	.18208 (.04383)	.074
Father's Education	[.00315] (.00596)	.013	[.00918] (.00583)	.039	[.01035] (.00569)	.044	[.00771] (.00472)	.033
Father's Occupation	[-.00243] (.00199)	-.058	[-.00219] (.00193)	-.052	[-.00222] (.00188)	-.053	[-.00038] (.00156)	-.009
Father White Collar	[.06887] (.07972)	.038	[.07444] (.07732)	.041	[.07289] (.07539)	.041	[-.00112] (.06261)	-.001
Father Foreign	.11022 (.04551)	.054	.09956 (.04463)	.049	[.07873] (.04361)	.038	.07628 (.03618)	.037
Father Absent	[.05564] (.17515)	.007	[.05710] (.16987)	.007	[.11338] (.16570)	.014	[.04472] (.03752)	.005
Siblings	[-.00512] (.00641)	-.018	[-.00386] (.00622)	-.014	[-.00123] (.00608)	-.004	[-.00437] (.00505)	.016
Non-Farm Upbringing	.15465 (.03967)	.095	.12502 (.03859)	.077	.13605 (.03768)	.084	.14598 (.03126)	.090
Non-South Upbringing	[.02645] (.03847)	.016	[.02479] (.03730)	.015	[.01582] (.03646)	.010	.05954 (.03029)	.036
Father's Ed.^{2*}	[-.00085] (.00134)	-.017	[0.00049] (.00130)	-.010	[-.00068] (.00128)	-.014	.00041 (.00107)	.009
Father's Occupation^{2*}	[.00007] (.00006)	.032	[.00006] (.00006)	.025	[.00006] (.00005)	.026	[.00001] (.00005)	.006
Test Score								

Table 16A: Regression of Ln Earnings on Characteristics of Civilian Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error) for Selected Equations

Independent Variable	Equation 6' B (S.E.)	Equation 6' Beta	Equation 7' B (S.E.)	Equation 7' Beta	Equation 8' B (S.E.)	Equation 8' Beta	Equation 9' B (S.E.)	Equation 9' Beta
Occupation								
Ln Weeks Worked							1.04055 (.03096)	.484
Constant	7.58197		7.44341		7.12247		3.31932	
R^2	.238		.285		.322		.533	
S.D. of Residual	.66027		.64004		.62392		.51772	

[*] Squared terms have been constructed so as to be uncorrelated with the corresponding linear variable. Multiplicative interactions have been constructed similarly so that they are uncorrelated with their components. Table 19 gives detailed definitions.

In regression (5), all interactions between Respondent White, Father's Education, Father's Occupation, Father Absent, Siblings and Test Score were considered after other variables had been entered. Interactions were added in the order of their significance, until no remaining interaction increased R^2 significantly. However, interactions which would prove significant in later regression (8) were also included.

In regression (8), interactions involving Years of Education, Experience and the above variables were considered. Interactions were added in order of significance until no remaining interaction increased R^2 significantly.

Coefficients in brackets are less than 1.96 times their standard errors.

Table 16B: Regression of Ln Earnings on Characteristics of Civilian Male Heads of Households, Aged 25-64 in 1971, with Earnings and Not in School, by Race: PSID Complete Data Sample (N = 1774)

Unstandardized Coefficient (B), (Standard Error) and Zero-Order Correlation (r)

	White		Non-White	
	B (S.E.)	r	B (S.E.)	r
Father's Education	[.00442] (.00634)	.155	[.02979] (.01540)	.189
Father's Occupation	[-.00214] (.00213	.166	[-.00998] (.00538)	.181
Father White Collar	[.06709] (.08357)	.162	[.38130] (.27285)	.213
Father Absent	[.05372] (.22024)	.008	[-.04719] (.24288)	-.039
Non-Farm Upbringing	.12645 (.04272)	.203	[.08582] (.09216)	.120
Non-South Upbringing	[.04028] (.04034)	.114	[-.12285] (.10711)	.188
Siblings	[.00315] (.00708)	-.166	-.04175 (.01458)	-.154
Test Score	.05061 (.01078)	.316	.06984 (.01787)	.324
Years of Education	.05741 (.01120)	.431	[.00834] (.01842)	.367
Years of Higher Education	[-.00189] (.02647)	.352	[.05875] (.07313)	.322
College Graduation	.18835 (.09610)	.323	[.49770] (.35713)	.303
Vocational Training	.08658 (.04185)	.011	.22629 (.10718)	.105
Experience	[-.00236] (.00163	-.215	[-.00829] (.00425)	-.271
Experience^{2*}	-.00110 (.00012)	-.264	-.00126 (.00029)	-.211
Constant	7.34828		7.68645	
R^2	.274		.245	
S.D. Residual	.60021		.88189	
N	1260		514	

Coefficients in brackets are less than 1.96 times their standard errors.

*Experience^2 is constructed so as to be uncorrelated with Experience in the complete data sample. Table 19 gives its detailed definition.

Table 16C: Regression of Ln Earnings on Characteristics of Civilian, Male Heads of Households Aged 25 - 64 in 1971 With Earnings and Not in School by Age: PSID Complete-Data Sample (N = 1774)

Unstandardized Coefficient (B), (Standard Error) and Zero-Order Correlations (r)

Age	25-34		35-44		45-54		55-64	
Variable	B (S.E.)	r	B (S.E.)	r	B (S.E.)	r	B (S.E.)	r
Respondent White	[.1370] (.0742)	.152	.3457 (.0860)	.278	[.1942] (.1022)	.234	[.1358] (.2286)	.166
Father's Education	[.0089] (.0083)	.181	.0357 (.0097)	.317	[-.0079] (.0097)	.167	[-.0123] (.0223)	.050
Father's Occupation	[.0023] (.0027)	.119	[-.00[illegible]0] (.00[illegible]1)	.231	-.0073 (.0032)	.219	[-.0107] (.0086)	.166
White Collar Father	[-.1848] (.1140)	.088	[.1079] (.1270)	.223	[.1133] (.1240)	.229	[.5285] (.3290)	.168
Father Absent	[-.1955] (.1859)	-.076	[-.3189] (.4178)	.008	[.2604] (.3934)	.007	[.6996] (.5899)	.025
Siblings	[.0022] (.0093)	-.133	[-.0135] (.0105)	-.257	[.0124] (.0106)	-.193	[.0045] (.0240)	-.143
Non-Farm Upbringing	[.0969] (.0578)	.131	[.1118] (.0613)	.157	.2690 (.0649)	.263	[.0701] (.1441)	.189
Non-South Upbringing	[-.0208] (.0519)	.110	[-.0295] (.0611)	.125	[.0383] (.0623)	.215	.3376 (.1524)	.227
Test Score	.0440 (.0148)	.285	[.0228] (.0165)	329	.0657 (.0160)	.407	.0735 (.0287)	.331
Years of Education	.1223 (.0213)	.360	.0708 (.0177)	.457	.0582 (.0157)	.515	[.0130] (.0324)	.394
Years of Higher Education	[-.0393] (.0382)	.290	[.0574] (.0392)	407	[-.0403] (.0402)	.416	[.0045] (.0954)	.314
College Graduation	[.0695] (.1195)	.255	[-.0337] (.1500)	.360	.4376 (.1585)	.396	[.4181] (.4014)	.287
Vocational Training	[-.0024] (.0562)	-.030	.1251 (.0617)	-.000	[.0883] (.0637)	.004	[.1957] (.1636)	.101
Experience	.0428 (.0078)	.070	.0307 (.0088)	-.244	[-.0056] (.0092)	-.398	-.0660 (.0206)	-.422
Constant	6.4862		6.8645		7.8147		10.4742	
R^2	.216		.312		.348		.270	
S.D. Residual	.5220		.5719		.5273		.9620	
N	545		528		431		270	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 16D: Regression of Ln Earnings on Characteristics of Civilian Male Heads of Households Aged 25-64 in 1971, with Earnings and Not in School by Father's Occupation: PSID Complete Data Sample (N = 1774)

Unstandardized Coefficient (B), (Standard Error) and Zero-Order Correlations (r)

Father's Occupation	White Collar		Blue Collar		Farming	
	B (S.E.)	r	B (S.E.)	r	B (S.E.)	r
Respondent White	[.12262] (.12913)	.078	.30403 (.08387)	.240	[.10113] (.08421)	.171
Father's Education	[-.00765] (.01000)	.002	[.01213] (.00965)	.140	[.00997] (.01038)	.193
Father's Occupation	[-.00124] (.00313)	-.028	[.00046] (.00301)	.068	*	
Father Absent	*	*	[.07038] (.17996)	-.024	*	
Siblings	[-.02521] (.01473)	-.159	[-.01021] (.00938)	-.191	[.01734] (.01006)	-.084
Non-South Upbringing	[.03516] (.07752)	.049	[.06939] (.05741)	.188	[.05648] (.05740)	.135
Test Score	[.01622] (.02122)	.230	.05720 (.01397)	.318	.07158 (.01479)	.388
Years of Education	.13772 (.03546)	.409	.03197 (.01402)	.371	.05950 (.01411)	.472
Years of Higher Ed.	[-.05779] (.05470)	.355	[.00751] (.03638)	.292	[-.01374] (.04533)	.354
College Graduation	[.03924] (.14860)	.320	[.27545] (.14173)	.273	[.33426] (.18671)	.323
Vocational Training	[-.01126] (.08284)	-.117	[.12527] (.05369)	.059	[.10723] (.07083)	.068
Experience	[-.00087] (.00346)	-.024	[-.00439] (.00227)	-.183	[-.00027] (.00272)	-.305
Experience^{2*}	-.00122 (.00025)	-.268	-.00116 (.00017)	-.201	-.00103 (.00018)	-.327
Constant	6.93690		7.25944		6.87988	
R^2	.270		.240		.325	
S.D. Residual	.57473		.66057		.64521	
N	329		862		583	

Coefficients in brackets are less than 1.96 times their standard errors.

*Experience^2 is constructed so as to be uncorrelated to Experience in the complete data sample. Table 19 gives its detailed definition.

**By their construction, these variables have no variance in these subsamples.

Table 16E: Regression of Ln Earnings on Characteristics of Civilian Male Head of Households Aged 25-64 in 1971, with Earnings and Not in School, By Test Score: PSID Complete Data Sample (N = 1774)

Unstandardized Coefficient (B), (Standard Error) and Zero-Order Correlation (r)

Test Score	1-9		10-11		12-13	
	B (S.E.)	r	B (S.E.)	r	B (S.E.)	r
Respondent White	.26470 (.07542)	.184	.32419 (.09388)	.176	[-.04920] (.14809)	.002
Father's Education	[.00133] (.01067)	.088	[.00349] (.00835)	.155	[.01706] (.01157)	.091
Father's Occupation	-.01252 (.00356)	.076	[.00285] (.00279)	.161	[-.00285] (.00378)	.093
White Collar Father	.52021 (.14587)	.111	[-.09823] (.11179)	.120	[.00057] (.15095)	.114
Father Absent	[.02373] (.24349)	-.035	[.12301] (.25545)	.021	[-.05648] (.54481)	-.019
Siblings	[.00922] (.00982)	-.074	-.01996 (.00926)	-.207	[.01456] (.01595)	-.084
Non-Farm Upbringing	.18381 (.05931)	.171	[.04138] (.05535)	.118	.21181 (.09904)	.148
Non-South Upbringing	[.03029] (.06088)	.159	[.01906] (.05561)	.087	[.11042] (.07881)	.134
Test Score	[.03422] (.01960)	.242	.09866 (.04514)	.127	[-.05789] (.07613)	.047
Years of Education	.03073 (.01314)	.314	.06485 (.01550)	.383	.07867 (.03098)	.419
Years of Higher Education	[-.02694] (.05076)	.171	[-.02281] (.03471)	.312	[.01468] (.05232)	.382
College Graduation	.53375 (.22403)	.178	[.18988] (.12214)	.291	[.10262] (.16404)	.338
Vocational Training	.21091 (.06395)	.161	[.04309] (.05424)	-.030	[.08706] (.09254)	-.064
Experience	-.00880 (.00260)	-.282	[.00052] (.00215)	-.128	[.00006] (.00366)	-.071
Experience^2 *	-.00107 (.00019)	-.286	-.00101 (.00016)	-.245	-.00102 (.00027)	-.193
Constant	7.76182		6.53627		8.16668	
R^2	.234		.235		.250	
S.D. Residual	.71559		.58945		.57965	
N	764		707		303	

Coefficients in brackets are less than 1.96 times their standard errors.

* Experience^2 is constructed so as to be uncorrelated to Experience in the complete data sample. Table 19 gives its detailed definition.

Table 17: Regression of Earnings$^{1/3}$ on Characteristics of Civilian Male Heads of Households Aged 25-64 in 1971 with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Independent Variable	Zero-Order Correlation	Equation 2 B (S.E.)	Equation 2 Beta	Equation 4 B (S.E.)	Equation 4 Beta	Equation 5 B (S.E.)	Equation 5 Beta
		Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error) for Selected Equations					
Respondent White	.195	2.05125 (.35908)	.136	1.22739 (.35270)	.081	1.17429 (.35163)	.078
Father's Education	.193	.17134 (.03762)	.118	.11970 (.03648)	.082	.11590 (.03649)	.080
Father's Occupation	.202	[-.01871] (.01281)	-.073	[-.02142] (.01233)	-.084	[-.01714] (.01238)	-.067
Father White Collar	.197	1.56273 (.51390)	.141	1.37671 (.49506)	.124	1.17188 (.49668)	.106
Father Foreign	.105	1.06435 (.29449)	.084	.87992 (.28398)	.070	.84150 (.28347)	.067
Father Absent	-.023	[-.83800] (1.14148)	-.016	[-.73327] (1.09911)	-.014	[-.71035] (1.09641)	-.014
Siblings	-.214	-.18193 (.04103)	-.106	-.11655 (.03989)	-.068	-.10762 (.03983)	-.063
Non-Farm Upbringing	.219	1.21279 (.25888)	.121	1.00774 (.24986)	.101	1.04335 (.24932)	.105
Non-South Upbringing	.183	.65601 (.24688)	.065	[.40858] (.23863)	.040	[.38900] (.23797)	.039
Father Occupation^{2}*	-.073	[-.00035] (.00032)	-.025	[-.00041] (.00031)	-.030	[.00009] (.00036)	.006
Test Score	.378			.65958 (.05581)	.278	.65280 (.05580)	.275
Fath. Occ. x Fath. Ed.*	-.125					-.00536 (.00175)	-.080
White x Siblings*	.002					[.10721] (.11463)	.020
Siblings x Father Ed.*	-.050					-.03922 (.01234)	-.070
Constant		17.38092		12.13852		10.33733	
R^2		.134		.198		.205	
S.D. of Residual		4.32644		4.16571		4.15002	

Table 17: Regression of Earnings$^{1/3}$ on Characteristics of Civilian Male Heads of Households Aged 25-64 in 1971 with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error) for Selected Equations

Independent Variable	Zero-Order Correlation	Equation 6 B (S.E.)	Equation 6 Beta	Equation 7 B (S.E.)	Equation 7 Beta	Equation 8 B (S.E.)	Equation 8 Beta
Respondent White		1.01444 (.33027)	.067	1.02578 (.31625)	.068	1.09151 (.31701)	.072
Father's Education		[.01354] (.03499)	.009	[.06057] (.03359)	.042	[.06033] (.03354)	.041
Father's Occupation		[-.01771] (.01164)	-.069	[-.01402] (.01107)	-.055	[-.01419] (.01105)	-.055
Father White Collar		[.45961] (.46978)	.041	[.41702] (.44691)	.038	[.40106] (.44636)	.036
Father Foreign		.58146 (.26809)	.046	[34643] (.25817)	.027	[.35375] (.25784)	.028
Father Absent		[.09456] (1.03036)	.002	[.40071] (.98047)	.008	[.43620] (.97926)	.009
Siblings		[-.01614] (.03785)	-.009	[-.00836] (.03603)	-.005	[-.00386] (.03603)	-.002
Non-Farm Upbringing		1.01198 (.23419)	.101	.92012 (.22345)	.092	.89642 (.22337)	.090
Non-South Upbringing		[.20583] (.22617)	.020	[.18112] (.21509)	.018	[.18218] (.21480)	.018
Father Occupation^{2*}		[.00029] (.00034)	.021	[.00023] (.00032)	.016	[.00019] (.00032)	.014
Test Score		.37335 (.05571)	.157	.33454 (.05309)	.141	.33022 (.05305)	.139
Fath. Occ. x Fath. Ed.*		-.00467 (.00165)	-.069	-.00428 (.00157)	-.064	-.00410 (.00157)	-.061
White x Siblings*		[.20793] (.10772)	.039	.22345 (.10246)	.042	.23996 (.10255)	.045
Siblings x Father Ed.*		-.03901 (.01161)	-.070	-.03732 (.01107)	-.067	-.03706 (.01106)	-.066
Years of Education	.489	.39925 (.05413)	.287	.28105 (.05510)	.202	.33335 (.05920)	.239
Years of Higher Ed.	.418	[-.02922] (.14339)	-.012	[.15513] (.13774)	.063	[.04729] (.14474)	.019
College Graduation	.384	1.73919 (.54109)	.145	1.61260 (.51521)	.135	1.61040 (.51452)	.134
Vocational Training	.003	.61649 (.22997)	.057	.61602 (.21935)	.057	.63083 (.21914)	.058
Experience	-.201			-.03027 (.00937)	-.078	-.03052 (.00936)	-.078
Experience^{2*}	-.245			-.00618 (.00063)	-.194	-.00620 (.00062)	-.195
Job Tenure	.124			.08978 (.01039)	.184	.08922 (.01038)	.183
Ed. x Test Score*	.062					[.03254] (.01359)	.053
Occupation	.450						
Constant		9.87545		8.16558		11.07662	
R^2		.303		.371		.373	
S.D. of Residual		3.89113		3.69945		3.69447	

Table 17: Regression of Earnings$^{1/3}$ on Characteristics of Civilian Male Heads of Households Aged 25–64 in 1971 with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error) for Selected Equations

Independent Variable	Equation 9 B (S.E.)	 Beta
Respondent White	.88674 (.31339)	.059
Father's Education	[.04863] (.03307)	.033
Father's Occupation	[-.01561] (.01089)	-.061
Father White Collar	[.42672] (.43957)	.039
Father Foreign	[.38347] (.25394)	.030
Father Absent	[.40861] (.96434)	.008
Siblings	[-.00486] (.03548)	-.003
Non-Farm Upbringing	.81101 (.22026)	.081
Non-South Upbringing	[.19055] (.21153)	.019
Father's Occupation^{2*}	[.00031] (.00032)	.023
Test Score	.29932 (.05241)	.126
Fath. Occ. x Fath. Ed.*	-.00378 (.00155)	-.056
White x Siblings*	.23875 (.10099)	.045
Siblings x Father Ed.*	-.03425 (.01090)	-.061
Years of Education	.26841 (.05895)	.193
Years of Higher Ed.	[-.08061] (.14356)	-.033
College Graduation	1.37469 (.50766)	.115
Vocational Training	.52492 (.21626)	.043
Experience	-.03003 (.00922)	-.077
Experience^{2*}	-.00622 (.00062)	-.196
Job Tenure	.08773 (.01022)	.180
Ed. x Test Score*	.02703 (.01340)	.044
Occupation	.04150 (.00557)	.189
Constant	10.79147	
R^2	.392	
S.D. of Residual	3.63816	

Coefficients in brackets are less than 1.96 times their standard errors.

*Squared terms have been constructed so as to be uncorrelated with the corresponding linear variable. Multiplicative interactions have been constructed similarly so that they are uncorrelated with their components. Table 19 gives definitions for these variables.

In regression (5), all interactions between Respondent White, Father's Education, Father's Occupation, Father Absent, Siblings and Test Score were considered after other variables had been entered. Interactions were added in order of their significance, until no remaining interaction increased R^2 significantly. However, these interactions which would prove significant in regression (8) were included.

In regression (8), interactions involving Years Education, Experience and the above variables, as well as interactions between Experience and College Graduation, and Experience and Years of Higher Education were considered. Interactions were added in order of significance until no remaining interaction increased R^2 significantly.

Table 18A: Regression of Family Income on Characteristics of Civilian Male Heads of Households Aged 25-64 in 1971 with Earnings and Not in School: PSID Complete Data Sample (N = 1774)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error) for Selected Equations

Independent Variable	Zero-Order Correlation	Equation 2		Equation 4		Equation 5	
		B (S.E.)	BETA	B (S.E.)	BETA	B (S.E.)	BETA
Respondent White	.139	2546.44 (691.78)	.089	1473.01 (692.94)	.051	1406.76 (694.69)	.049
Father's Education	.165	284.62 (72.47)	.103	198.23 (71.26)	.072	193.37 (71.56)	.070
Father's Occupation	.185	-65.12 (24.67)	-.134	-68.61 (24.07)	-.141	-63.34 (24.28)	-.130
Father White Collar	.199	4418.58 (990.05)	.210	4038.7[illegible] (966.95)	.192	3826.30 (975.23)	.182
Father Foreign	.137	2826.90 (567.36)	.117	2481.72 (554.82)	.103	2460.95 (555.88)	.102
Father Absent	-.027	[-2322.27] (2199.11)	-.024	[-2028.54] (2145.73)	-.021	[-2037.89] (2148.44)	-.021
Siblings	-.182	-294.90 (79.04)	-.090	-190.21 (77.87)	-.058	-180.41 (78.09)	-.055
Non-Farm Upbringing	.206	2244.92 (498.74)	.118	1877.60 (488.12)	.099	1908.83 (488.94)	.100
Non-South Upbringing	.163	1043.47 (475.63)	.054	[747.58] (467.02)	.039	[725.74] (467.56)	.038
Father Occ.^{2}*	-.065	[-.65] (.62)	-.025	[-.80] (.61)	-.031	[-.38] (.71)	-.015
Test Score	.313			1010.71 (108.92)	.224	1010.00 (109.55)	.223
Test Score^2*	.063			77.18 (32.22)	.053	74.78 (32.26)	.052
Father Occ. X Sibs*	.007					[-3.88] (4.36)	-.020
Fath Occ X Fath Ed*	-.101					[-4.85] (3.35)	-.038
White X Siblings*	-.001					[92.03] (224.63)	.009
Years of Education	.432						
Years of Higher Ed	.405						
College Graduation	.381						
Vocational Training	-.022						
Experience	-.033						
Experience^2 *	-.202						
Job Tenure	.130						
Ed X Father's Ed*	.065						

Table 18A (continued: 2)

Independent Variable	Zero-Order Correlation	Equation 2		Equation 4		Equation 5	
		B (S.E.)	BETA	B (S.E.)	BETA	B (S.E.)	BETA
Coll Grad X Exper*	.142						
Occupation	.397						
Constant		8771.33		6449.93		5232.04	
R^2		.114		.158		.159	
S.D. of Residual		8335.06		8129.74		8130.01	

Table 18A. (Continued: 3)

Standardized (BETA) and Unstandardized (B) Regression Coefficients (and Standard Error) for Selected Equations

Independent Variable	Equation 6		Equation 7		Equation 8	
	B (S.E.)	BETA	B (S.E.)	BETA	B (S.E.)	BETA
Respondent White	[1094.61] (658.95)	.038	[629.76] (636.49)	.022	[753.89] (634.32)	.026
Father's Education	[19.95] (69.33)	.007	133.46 (67.03)	.048	165.26 (67.15)	.060
Father's Occ.	-60.18 (23.06)	-.123	-51.78 (22.09)	-.106	-56.50 (22.02)	-.116
Father White Collar	2356.22 (931.90)	.112	2053.78 (892.96)	.097	1998.50 (889.19)	.095
Father Foreign	1912.02 (530.89)	.079	[1004.51] (514.73)	.042	1071.20 (512.72)	.045
Father Absent	[-827.12] (2040.65)	-.009	[17.16] (1955.56)	.000	[220.08] (1950.98)	.002
Siblings	[-20.59] (75.03)	-.006	[-32.39] (71.90)	-.010	[-25.99] (71.70)	-.008
Non-Farm Upbringing	1933.30 (464.36)	.102	1958.70 (446.41)	.103	1950.30 (444.43)	.103
Non-South Upbringing	[531.30] (448.23)	.028	[421.73] (429.33)	.022	[486.20] (427.91)	.025
Father Occ.^{2}*	[-.07] (.63)	-.003	[-.02] (.65)	-.001	[-.00] (.65)	-.000
Test Score	543.19 (110.40)	.120	506.23 (105.99)	.112	502.20 (105.52)	.111
Test Score^{2}*	[49.29] (31.20)	.034	[47.41] (30.03)	.033	[48.53] (29.91)	.034
Father Occ X Sibs*	[-6.23] (4.14)	-.032	-8.94 (3.99)	-.046	-9.12 (3.97)	-.047
Fath Occ X Fath Ed*	[-4.56] (3.19)	-.036	[-4.64] (3.06)	-.036	-8.31 (3.27)	-.065
White X Siblings*	[268.14] (213.35)	.026	[336.30] (204.39)	.033	[375.87] (203.72)	.037
Years of Education	532.54 (108.39)	.201	631.78 (110.60)	.238	707.98 (115.39)	.267
Years of Higher Ed.	[136.84] (285.81)	.029	[247.70] (276.05)	.053	[-.88] (284.46)	-.000
College Graduation	3762.48 (1071.22)	.165	3703.96 (1027.24)	.162	3858.36 (1024.42)	.169
Vocational Training	[811.84] (455.63)	.039	924.52 (437.68)	.045	930.13 (435.94)	.045
Experience			98.79 (18.80)	.133	99.41 (18.78)	.134
Experience^{2}*			-9.78 (1.25)	-.162	-8.35 (1.33)	-.138
Job Tenure			102.06 (20.72)	.110	102.36 (20.64)	.110
Ed X Father's Ed*					65.56 (19.78)	.081

Table 18A (continued: 4)

Standardized (BETA) and Unstandardized (B) Regression Coefficients (and Standard Error) for Selected Equations

Independent Variable	Equation 6		Equation 7		Equation 8	
	B (S.E.)	BETA	B (S.E.)	BETA	B (S.E.)	BETA
Coll Grad X Exper*					154.52 (50.09)	0.68
Occupation						
Constant	3165.37		6220.05		-422.24	
R^2	.247		.311		.318	
S.D. of Residual	7703.18		7375.83		7342.85	

Table 18A (continued: 5)

Standardized (BETA) and Unstandardized (B) Regression Coefficients (and Standard Error) for Selected Equations

Independent Variable	Equation 9 B (S.E.)	 BETA
Respondent White	429.89 (631.24)	.015
Father's Education	149.34 (66.61)	.054
Father's Occ.	-58.95 (21.33)	-.121
Father White Collar	2040.4[illegible] (881.32)	.097
Father Foreign	1122.79 (508.24)	.047
Father Absent	173.41] (1933.64)	.002
Siblings	[-27.05] (71.06)	-.008
Non-Farm Upbringing	1826.05 (441.01)	.096
Non-South Upbringing	[490.75] (424.10)	.026
Father Occ.^{2}*	[.21] (.64)	.008
Test Score	453.60 (104.93)	.100
Test Score^2*	[35.20] (29.73)	.024
Father Occ X Sibs*	-8.51 (3.94)	-.044
Fath Occ X Fath Ed*	-8.10 (3.25)	-.063
White X Siblings*	378.82 (201.91)	.037
Years of Education	620.11 (115.40)	.234
Years of Higher Ed	-221.41 (284.57)	-.047
College Graduation	3497.22 (1017.28)	.153
Vocational Training	766.45 (433.01)	.037
Experience	100.86 (18.62)	.136
Experience^2*	-8.34 (1.32)	-.138
Years on Present Job	99.58 (20.46)	.107
Ed X Father's Ed*	67.89 (19.61)	.084

Table 18A (continued: 6)

Independent Variable	Equation 9 B (S.E.)	BETA
Coll Grad X Exper*	158.17 (49.65)	.069
Occupation	63.61 (11.15)	.152
Constant	148.71	
R^2	.330	
S.D. of Residual	7277.53	

* Squared terms have been constructed so as to be uncorrelated with the corresponding linear variable. Multiplicative interactions have similarly been constructed so that they are uncorrelated with their components. Table 19 gives detailed definitions for these terms.

In regression (5), all interactions between Respondent White, Father's Education, Father's Occupation, Father Absent, Siblings & Test Score were considered after other variables had been entered. Interactions were added in the order of their significance, until no remaining interaction increased R^2 significantly. However, interactions which would prove significant in later regressions (8) were also included.

In regression (8), interactions involving Years of Education, Experience and the above variables were considered. Interactions were added in order of significance until no remaining interaction increased R^2 significantly.

Coefficients in brackets are less than 1.96 times their standard errors.

Table 18B: Regression of Family Income on Characteristics of Civilian Male Heads of Households, Aged 25-64 in 1971 with Earnings and Not in School, by Race: PSID Complete Data Sample (N = 1774)

Unstandardized Coefficient (B), (Standard Error) and Zero-Order Correlation (r)

	White		Non-White	
	B (S.E.)	r	B (S.E.)	r
Father's Education	[110.0] (78.4)	.143	[95.5] (133.4)	.226
Father's Occupation	-62.7 (26.3)	.163	[-63.5] (46.6)	.279
Father White Collar	2329.3 (1033.1)	.182	[3171.4] (2362.4)	.306
Father Absent	[225.0] (2722.5)	-.002	[-1724.6] (2103.0)	-.072
Non-Farm Upbringing	2237.7 (528.0)	.205	[794.8] (797.9)	.170
Non-South Upbringing	[465.2] (498.7)	.114	1979.8 (927.4)	.265
Siblings	[-8.6] (87.5)	-.160	-357.2 (126.2)	-.158
Test Score	538.2 (133.2)	.289	427.8 (154.7)	.299
Years Education	697.3 (138.4)	.413	543.7 (159.5)	.436
Years of Higher Education	[222.6] 327.2	.389	[566.1] (633.2)	.482
College Graduation	3402.6 (1187.9)	.368	6621.5 (3092.1)	.469
Vocational Training	[823.9] (517.3)	-.030	[-125.0] (928.0)	.005
Experience	136.2 (20.1)	-.024	168.6 (36.8)	-.081
Experience^2	-10.4 (1.5)	-.210	-9.7 (2.5)	-.152
Constant	-9336.5		-6037.2	
R^2	.277		.344	
S.D. Residual	7419.3		7635.7	
N	1260		514	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 19: Definitions of Orthogonalized Squares and Interaction Terms Used in Multiple Regressions: PSID

Orthogonal Term	Definition
Father's Education^2	Father's Education(Father's Education - 1[illegible])
Father's Occupation^2	Father's Occupation(Father's Occupation - [illegible].32[illegible])
Siblings^2	Siblings(Siblings - [illegible])
Test Score^2	Test Score(Test Score - [illegible].02[illegible])
Age^2	Age(Age - [illegible])
Experience^2	Experience(Experience - [illegible].320)
Years of Education X Test Score	Years of Education(Test Score) - [illegible].[illegible]152(Years of Education) - 10.5[illegible]4(Test Score)
Years of Education X Father's Education	Years of Education(Father's Education) - 7.853[illegible](Years of Education) - 12.[illegible]6[illegible](Father's Education)
Father's Occupation X Siblings	Father's Occupation(Siblings) - 3.1422(Father's Occupation) - 25.648 (Siblings)
Father's Occupation X Father's Education	Father's Occupation(Father's Education) - 1[illegible].350(Father's Occupation) - 24.321(Father's Education)
Respondent White X Siblings	Respondent White(Siblings) - 5.20[illegible](Respondent White) - .[illegible](Siblings)
Respondent White X Father Absent	Respondent White(Father Absent) - .02042(Respondent White) - .[illegible]32(Father Absent)
Respondent White X Father's Education	Respondent White(Father's Education) - 7.7603(Respondent White) - .[illegible]472(Father's Education)
Siblings X Father's Education	Siblings(Father's Education) - [illegible].[illegible](Siblings) - 3.4261(Father's Education)
Experience X Test Score	Experience(Test Score) - 9.[illegible]123(Experience) - [illegible].046(Test Score)
Experience X Father Absent	Experience(Father Absent) - .00240(Experience) - 22.308(Father Absent)

Table 19 (continued)

Orthogonal Term	Definition
Experience X Father's Education	Experience(Father's Education) - .6213(Experience) - 21.251(Father's Education)
Age X Father's Occupation	Age(Father's Occupation) - 28.232(Age) - 40.782(Father's Occupation)
Age X Respondent White	Age(Respondent White) - .80640(Age) - 41.735(Respondent White)
Years of Higher Education X Experience	Years of Higher Education(Experience) - 10.108(Years of Higher Education) - .25852(Experience)
Graduate School X Experience	Graduate School(Experience) - 17.328(Graduate School) - .04202(Experience)
College Graduation X Experience	College Graduation(Experience) - 18.069(College Graduation) - .12856(Experience)
Years of Education X Experience	Years of Education(Experience) - 26.338(Years of Education) - 11.223(Experience)

Table 20 (Interactions)

Sign and F-Level of Interaction Terms when Entered Separately in Selected Regressions: PSID Complete Data Sample (N = 1774)

	Dependent Variable			
	Test Score	Years of Education	Occupation	
	3	4	4	7
Test Score X Father's Occupation		-.5	+1.0	+1.3
Test Score X White		-.0	+.1	-.0
Test Score X Siblings		-2.4	-1.4	-.0
Test Score X Father Absent		+.6	+.3	+.1
Test Score X Father's Education		-3.4	+.0	+.1
Father's Occupation X White	-2.8	-7.8	-1.4	-.0
Father's Occupation X Siblings	+9.3	+8.3	+.0	-1.2
Father's Occupation X Father Absent	*	*	*	*
Father's Occupation X Father's Education	-3.1	-3.9	-.5	-.6
White X Siblings	-5.8	-5.7	-1.2	-.0
White X Father Absent	+.1	+6.0	+.8	+.0
White X Father's Education	+.5	-8.7	-.5	+.1
Siblings X Father Absent	+.3	-.3	+1.0	+2.0
Siblings X Father's Education	+.3	+1.2	-1.9	-1.5
Father Absent X Father's Education	*	*	*	*
Age X Years of Education				
Age X Test Score		+2.9		
Age X Father's Occupation	+17.5	+13.9		
Age X White	+8.5	+2.1		
Age X Siblings	-7.3	-2.0		
Age X Father Absent	+.3	-3.4		
Age X Father's Education	+5.4	+4.0		
Years of Education X Test Score				+.2
Years of Education X Father's Occupation				-2.3
Years of Education X White				-.3
Years of Education X Siblings				-.0
Years of Education X Father Absent				+.4
Years of Education X Father's Education				-1.0
Experience X Test Score				-.8
Experience X Father's Occupation				-1.8
Experience X White				+.4
Experience X Siblings				-2.9
Experience X Father Absent				-2.4
Experience X Father's Education				-.0
Years Past High School X Experience				
Graduate School X Experience				
Years of Education X Experience				-2.6
College Graduation X Experience				-.2

Regressions 3 for Test Score, 4 for Years of Education, and 4 for Occupation are identical to regressions in Tables 12, 13A and 14A. Regression 7 for Occupation is similar to regression 7 in Table 14A, except Job Tenure is not included.

Table 20 continued

Sign and F-Level of Interaction Terms when Entered Separately in Selected Regressions Predicting Various Transformations of Earnings: PSID (N = 1774)

	Earnings		Ln Earnings		Earnings$^{1/3}$	
	4	7	4	7	4	7
Test Score X Father's Occ.	-0.0	+.1	-.2	-.0	+.0	+.0
Test Score X White	+.3	+.3	-.1	-.2	+.8	+.4
Test Score X Siblings	-1.1	-.2	-.6	-.2	-1.6	-.2
Test Score X Father Absent	-0.0	-.0	+.2	+.2	+.1	+.1
Test Score X Father's Ed.	+1.1	+1.7	+2.3	+2.1	+1.3	+1.2
Father's Occ. X White	-.8	-.1	-.5	-.0	-.2	+.1
Father's Occ. X Siblings	-3.9	-3.1	-1.6	-.7	-3.4	-2.3
Father's Occ. X Father Absent	*	*	*	*	*	*
Father's Occ. X Father's Ed.	-4.8	[-8.4]	-4.1	[-2.9]	-5.6	[-7.1]
White X Siblings	+1.5	[+3.9]	+1.2	[+5.5]	+.6	[+4.8]
White X Father Absent	+0.0	-.1	+.4	+.0	+.3	+.0
White X Father's Ed.	-.6	-.4	-1.5	-2.2	-.8	-1.0
Siblings X Father Absent	+.1	+.2	+.5	+1.6	+.2	+1.2
Siblings X Father's Ed.	-5.6	[-9.0]	-5.3	[-7.2]	-6.1	[-11.4]
Father Absent X Father's Ed.	*	*	*	*	*	*
Age X Years of Education						
Age X Test Score						
Age X Father's Occ.						
Age X White						
Age X Siblings						
Age X Father Absent						
Age X Father's Education						
Years of Ed. X Test Score		+9.9		+2.0		+6.4
Years of Ed. X Father's Occ.		+.6		+.3		+.7
Years of Ed. X White		-0.0		-.0		+.1
Years of Ed. X Siblings		-.5		-.3		-.5
Years of Ed. X Father Absent		-1.6		-1.9		-2.1
Years of Ed. X Father's Ed.		+2.0		+1.0		+.9
Experience X Test Score		+13.8		+1.0		-.0
Experience X Father's Occ.		+12.0		-.7		-.7
Experience X White		+8.4		+.0		-.3
Experience X Siblings		+3.4		+.1		+.0
Experience X Father Absent		+1.3		+3.9		+2.8
Experience X Father's Ed.		+12.6		-7.4		-3.6
Years Past H.S. X Experience						
Grad. School X Experience						
Years of Ed. X Experience		+24.5		-3.1		-2.3
Coll. Grad. X Experience						+2.7

Bracketed cells indicated that those interaction terms have already been entered in the regression.

Table 20 continued

Earnings regression 4 is identical to regression 4, Table 15A.

Earnings regression 7 differs from regression 7, Table 15A, in that Father's Occupation X Siblings and Job Tenure are not included in the regression.

Ln Earnings regression 4 is identical to regression 4, Table 16A.

Ln Earnings regression 7 differs from regression 7, Table 16A, in that Job Tenure is not included as an independent variable.

Earnings$^{1/3}$ regression 4 is identical to regression 4, Table 17.

Earnings$^{1/3}$ regression 7 differs from regression 7, Table 17, in that Job Tenure is not included.

Appendix E: THE 1973 NORC AMALGAM SURVEY

By David Eaglesfield

The National Opinion Research Center (NORC) conducts "amalgam" surveys at regular intervals to fulfill several different clients' survey requests. Amalgam Survey No. 4179 was conducted in December, 1973, and January, 1974. Further data were collected in the spring of 1974, and I will refer to the combined data as NORC Amalgam No. 4189, or simply "the NORC".

THE SAMPLE

The target population was the non-institutionalized population of the continental United States, 18 years of age or older. The primary sampling units were Standard Metropolitan Statistical Areas and non-metropolitan counties.

At the block level, respondents were taken on a quota basis. The quotas were partially controlled by age (appropriate proportions of ages 18-34 and 35-and-over were maintained) and by employment status. NORC made no effort to contact potential subjects who were not at home on the first day, but in an effort to minimize biases introduced by omitting the most mobile, hard-to-catch people, the interviewers worked only on weekends, holidays and after 3 p.m. on weekdays. Once in the block, the interviewer selected dwelling units by a systematic procedure and asked to interview any available person fitting the quota restrictions. This probably results in some overrepresentation of household heads and underrepresentation of transients.

NORC surveyed 705 males. This sample is intended to be, and probably is, representative of non-institutionalized males over 18 living in the continental United States.

For the purposes of this analysis I also excluded full time students, men under 25 and men 65 or older. These restrictions leave 454 men, referred to hereafter as the "Basic Sample." Of these 454 men, 300 reported that they had a brother, and knew where their oldest brother lived. In the spring of 1974, NORC succeeded in contacting 177 of these brothers by telephone and asking them 22 questions. Of the resulting 177 pairs of brothers, 150 had complete data for each brother on Age, Years of Education, Occupation, Earnings,

Race, Siblings, and the presence of a father or stepfather in childhood. In order to avoid further sample reduction, I allocated the basic sample mean to those who were missing father's education or father's occupation. I allocated the sample mode for two dummies derived from Father's Occupation, namely Father White Collar (mode = 0) and Non-Farm Background (mode = 1), to these men. For those who reported their own earnings but not family income, I assumed the two were equal.

These 300 men (150 primary respondents and their 150 brothers) comprise the Brother Sample. In this appendix I treat the Brother Sample much as the Complete Data Sample is treated in other chapters, using it for all regressions.

Note that of the 300 men, 5 are in the armed forces. Some of the other data sets analyzed in this book excluded men in the armed forces.

THE VARIABLES

I use 15 basic variables in this analysis. Some of the variables appear in more than one guise. For instance, both age and age squared are used; race appears as a trichotomy (white, black, other) and also as a dummy variable (white, non-white). Table 1 gives the questionnaire items on which these variables are based, as well as their frequency distributions. I have grouped the age and occupation frequencies for reporting purposes, but they are not grouped in the regressions. Note that NORC originally recorded the earnings and income variables in categories. I coded these categories at their midpoints.

UNIVARIATE STATISTICS

Tables 1 and 2 give the univariate statistics. These statistics are very similar to those of the 1970 Census and the OCG, analyzed in other appendices.

RESPONDENTS' BACKGROUND AND EDUCATION

I attempted to correct for differences in year of data collection by comparing NORC men aged 36-75 in 1973 to OCG men aged 25-64 in 1962. Table 2F gives the resulting means and standard deviations. The means are fairly similar and do not show any consistent pattern. The standard deviations are generally greater in the NORC Amalgam.

OCCUPATION

Table 2 shows that the NORC Amalgam mean is 1.5 points higher than the OCG. The NORC S.D. exceeds the OCG S.D., but the significance is only .10.

EARNINGS

The earnings and income variables may not be comparable from one survey to another for a variety of reasons. The 1962 OCG has data on income, not earnings. CPS reports that mean income in 1972 was $11,009 for men aged 25 to 64. The NORC Amalgam Earnings mean is $275 higher.

The best comparison between different samples is probably Ln Earnings. The NORC mean of Ln Earnings is significantly higher than the OCG income mean and the Census earnings mean. The NORC S.D. is not significantly different from OCG but is significantly larger than the Census (at the 0.05 but not at the 0.01 level). This is surprising, since the NORC data are grouped.

SUMMARY CORRELATIONS

The correlations for the basic sample in Table 2A have standard errors of about ± 0.05. Comparing them to the analogous Census and OCG correlations, and treating the latter as having negligible standard errors, we see that relatively few differences are significant. The correlations of Father's Education and Father's Occupation with the respondent's characteristics are consistently lower in NORC than in OCG, and for the respondent's Occupation and Earnings (or Ln Earnings) the differences are significant. Age is also more negatively correlated with education in the NORC Amalgam basic sample than in the Census or OCG, though this does not hold for the NORC Brothers.

BIVARIATE RELATIONSHIPS

In comparing the NORC bivariate relationships to those of the OCG and 1970 Census, I will ask two questions.

(1) Is there any general tendency for NORC coefficients to be higher or lower than those in the OCG or 1970 Census.

(2) Do the NORC coefficients ever differ by more than 2 standard errors from OCG or 1970 Census coefficients.

EFFECTS OF FATHER'S EDUCATION

Father's Education shows smaller effects for NORC. We observe this in both Tables 3A where the eta^2 are smaller than in the OCG Table 3A and in Table 3B, where both the regression coefficients and the R^2 are smaller for NORC. However, the R^2 are very close in their magnitudes despite the consistent trend noted, and even the regression coefficients never differ by as much as 2 NORC standard errors.

I conclude that the NORC bivariate relations involving Father's Education as the independent variable are consistent with those of the OCG. In both data sets, Father's Education explains about 18 percent of the variance in son's education but only 3-5 percent of the variance in the log of earnings or income.

EFFECTS OF FATHER'S OCCUPATION

Father's Occupation definitely shows a weaker relationship to respondent's outcomes in NORC than in OCG in Tables 4A and 4B. The OCG eta^2 and R^2 are 50 percent or more larger than NORC figures. Several of the coefficients (Table 4B) are at least one or two standard errors smaller than the OCG slopes.

If this represents a change in the social laws, then the 1973 NORC father's occupations are less influential for their sons outcomes than were the

1962 OCG. Alternately, there has been no change, but the lower coefficients and R^2 in the NORC sample are due to biased sampling. The discrepancies involving the effects of Father's Occupation are too large to be easily discounted as random sampling error

EFFECTS OF SIBLINGS

Siblings have negative effects, particularly on education. Respondents lose 0.41 years of schooling and 2.6 points of occupational status for each additional sibling. Siblings have weaker negative effects on the income variables. This time, the NORC effects are stronger than the OCG effects, but the regression coefficients do not differ by 2 NORC standard errors. R^2 with Years of Education as the dependent variable is 0.132 in NORC and 0.116 in OCG. This difference may be due to restricted variance for the siblings in the NORC Brothers sample, or to random sample differences.

In the Basic Sample, the NORC and OCG S.D. for Siblings are equal.

I conclude that the NORC bivariate relationships involving the variable Siblings are not different from those of the OCG.

EFFECTS OF RACE

Table 2 shows that the NORC Basic Sample has more blacks than OCG, but the Brothers Sample has fewer blacks than the OCG "complete data" sample. Given the social upheavals between the OCG and NORC surveys, there is no reason to expect similar eta^2, R^2, or B values for race.

Table 6 shows smaller race effects than does OCG in terms of mean differences as well as in eta^2. The NORC blacks are significantly better educated and have significantly higher Ln Earnings than OCG. On many of these variables, the black means on the Census are intermediate between OCG and NORC. The black-white differences are smaller in NORC, largest in OCG and again intermediate in the Census. Nevertheless, race effects are still large in the NORC Amalgam. Being white brings a 13 point advantage in occupational status and $4000 per year bonus. Eta^2 is small, due to large within cell variance.

EFFECTS OF AGE

Table 7A shows a much stronger association of age with education for NORC than OCG, with eta^2 of 0.147 and 0.067 respectively. Tables 7A for both NORC and OCG show that the effect is due to the significantly higher average education of the younger categories of NORC men and smaller within-cell variances at all ages. This holds even if we compare NORC men to OCG men ten years younger. The 1970 Census data are intermediate. For instance, the Census age group 30-34 is between the OCG age group 25-29 and the NORC age group 35-39 on Years of Education. In Table 2A, the correlation of Age and Years of Education is -0.356 for the NORC Basic Sample but only -0.254 for the NORC Brothers. Thus, in Table 7B the NORC Amalgam looks much more like the OCG. In both, R^2 is about 0.06 for Years of Education, and regression coefficients do not differ by as much as 2 standard errors.

Turning to the dependent variables other than Education, we do not find dramatic differences. I conclude that in general, age effects are of the same nature in NORC as in OCG and the Census with the one exception of Education noted above.

EFFECTS OF EDUCATION

Table 9A shows NORC eta^2 to be more similar to the analogous eta^2 for the Census than the OCG. The NORC

regression coefficients are higher than either OCG or Census coefficients on the two most nearly comparable regressions -- Occupation and Ln Earnings on Years of Education -- but they are never more than 2 standard errors higher. The variance of the Ln Earnings residuals is higher for NORC than Census or OCG, but the variance of the Occupation residuals in NORC is the same as in OCG.

I can draw no clear conclusions. The NORC education equations look different from OCG and Census (which are even more different from each other) on R^2, but the regression coefficients are not very different.

EFFECTS OF WORK EXPERIENCE

The Ln Earnings equations in Table 10 show that education and experience together explain about the same percentage of variance in NORC as in the Census, but the S.D. of residuals is larger in NORC. The regression coefficients look different at first glance, but due to the large standard errors of the NORC coefficients, they cannot be said to differ significantly.

MULTIVARIATE RELATIONSHIPS

In this section, multiple regressions are used to measure the effects of combinations of causal variables on the various outcome variables. Therefore the discussion is organized by dependent variable rather than by independent variable as in the Bivariate Relationships section. Education is considered as both a causal variable (relative to occupation and earnings variables) and as a dependent variable (relative to respondent's background and age).

The NORC Brothers sample has so few cases (n = 300 for the subsample used for regression) that the results of multiple regression are of limited use for estimating the effects of specific independent variables. R^2 and the S.D. of the residuals are more stable, however, and can be compared across data sets.

Appendices dealing with larger samples enter even more variables into their regression equations than I show in these multivariate tables. Specifically, those chapters explore the effects of non-linear terms (usually squares and multiplicative combinations of variables). These typically add very little to R^2 and are useful only in correcting the regression coefficients to better fit curvilinear patterns of data. For the NORC Brothers I have omitted almost all these terms. Age^2 is the only exception. It is simply the square of the Age variable, and as a result is highly correlated with Age. Nevertheless, it seems to add significantly to the explained variance in some equations, indicating that the occupational success measures are curvilinear functions of age.

DETERMINANTS OF EDUCATION

Equation 1 in Table 13A shows the regression coefficients for Years of Education as a function of all of respondent's measured background characteristics available in the NORC Amalgam. Equation 3 adds Age and Age^2 which increases the explained variance by 0.01. R^2 is 0.27 and NORC vs. .35 in the OCG. The standard deviation of the residuals is 2.69 in NORC and 2.98 in OCG. The individual regression coefficients look quite different but are within range of the OCG coefficients, given the large standard errors of the NORC statistics.

Table 13A presents the first of the difference score regressions in the column headed D3. Equation D3 is comparable to Equation 3 in some respects. The difference scores used are simply the second brother's score subtracted from the first brother's. Calculating this difference is sensible only where the brothers can have different true scores, as they can for age, education, occupation and earnings, but not for father's education, race, number of siblings, etc.

The difference between two brothers is always twice the deviation of either brother from the pair mean. The correlation of difference scores on two different variables, such as age and education, is therefore equal to the "within-pair" correlation of a brother's deviation from the pair mean on one variable with his deviation from the pair mean on the other variable. The within-pair correlation of Age and Education is shown in the first column of Table 13A, along with the overall correlation. Because the correlations involve different variables with different variances, they are not directly comparable.

One can, however, compare the unstandardized regression coefficients within pairs to those for the sample as a whole. Equation 3 shows that for the sample as a whole a one year difference in age is associated with an 0.029 year difference in Years of Education, once measured family background has been controlled. Equation D[illegible] shows that when we control all aspects of family background and look only at variations within a single family, a one year difference in age is associated with an 0.122 difference in Years of Education. This suggests that controlling only the measured aspects of family leads to an underestimate of the effect of age on educational attainment. It could also mean that older siblings generally get less education than younger ones. Alternatively, it may mean that the factors determining educational differences within families are different from those that operate between families, perhaps because siblings influence one another in some way.

All of the correlations among the difference scores are recorded in Table 2G. These correlations are best visualized as being based on 150 pairs of brothers, not 300 men. Each pair of brothers was entered in the file twice, with the order reversed. The file was weighted by 0.5 so that all significant tests were based on 150 degrees of freedom. 1/

Table 13A also shows that Age explains 9.1 percent of the within-pair variance. But because the regression is run using difference scores rather than deviations from the pair mean, the unstandardized error variance is four times greater than the unstandardized unexplained within-pair variance, which is $(2.890/2)^2$. In other respects, the regressions of the "D" models are equivalent to

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1/ The technique of doubling the file to compute intraclass correlation coefficients [illegible] and Cochran, Statistical Methods, 6th Edition, 1967, p. 295.

regressions on ordinary data with the addition of a dummy variable for each family. Entered alone, these dummies would explain all the "between family" variance. In this case, since brothers' educational attainments correlate 0.528, we know that 47.2 percent of the total educational variance is within pairs. . The R^2 of the "D" models is the percentage of this within-family variance explained by the independent variables. The drop in R^2 typically observed as we compare an Equation 3 to an Equation D3, say, is due to eliminating the between-family variance from both numerator and denominator. R^2 drops because measured family characteristics typically explain a percentage of the between pair variance larger than the percentage of within-pair variance explained by individual characteristics. Tables 13A through 18A present these difference equations without much comment. They are discussed more fully in previous chapters.

Note that the standard errors reported for the "D" models are based on 150 degrees of freedom, not 300. This is because the difference equations treat the 300 brothers as 150 pairs, leaving only 150 degrees of freedom. It is as if we had used 150 degrees of freedom by adding 150 family dummies.

DETERMINANTS OF OCCUPATION

Table 14A displays the regressions of respondent's Occupation (his Duncan score) on background, education and age variables. The overall pattern is similar to the OCG. For instance, R^2 increases by 0.20 in OCG and 0.22 in NORC when the education variables enter. But R^2 is slightly lower for the NORC Brothers than for OCG, and the standard deviation of the residuals higher.

DETERMINANTS OF LN EARNINGS

Table 16A gives regressions with Ln Earnings dependent. Equation 6 in both the NORC and OCG Tables 16A includes background and education among the independent variables. Again, OCG has higher R^2 (0.23 to NORC's 0.17) and smaller S.D. of the residual (0.72 to NORC's 0.81). The Census (Table 16A, Equation 6) R^2 is the same as NORC's. The S. D. of residuals is 0.65 in the Census vs. 0.81 in NORC. The difference between NORC and OCG is even greater for Equation 9, which includes Occupation.

DETERMINANTS OF EARNINGS

Table 15A gives several regression equations with Annual Earnings as the dependent variable. In both NORC and OCG R^2 increases sharply when the education variables enter. The value of R^2 in Equations 6 and 9 is much higher in OCG than in NORC.

Table 15A of the Census appendix shows that by using only education and work experience variables, the Census has a higher R^2 (0.20) than does NORC when NORC includes family background variables as well as education and age. (Education and age variables together explain virtually the same variance as do education and work experience variables together, since work experience is a nearly linear combination of the Years of Education and Age variables.) There are two reasons for this.

(1) As we saw by comparing NORC and OCG, the background variables just do not explain earnings variance very well in NORC.

(2) The effects of measured background variables, such as they are, are largely mediated through education variables.

DETERMINANTS OF FAMILY INCOME

Table 18A shows that family income is less well predicted by respondent's background and personal characteristics than is Ln Earnings. That is perfectly natural. Total family income is subject to additional effects (such as other family members' incomes) which are less well predicted by respondent's characteristics than are the respondent's own earnings.

CONCLUSIONS

I conclude that the NORC data set is reasonably like the OCG and Census as far as many of the univariate and bivariate statistics go. The major exception is that the effect of Father's Occupation is weaker in NORC than OCG.

In multivariate relations, the background and education variables explain less variance in the respondent's outcomes in the NORC Brothers than in the OCG. This is partly because the correlations among background characteristics are higher in NORC than OCG, though the differences are, as noted before, never greater than two standard errors. For instance, Father's Education correlates with Father's Occupation 0.518 in NORC but only 0.464 in OCG. These small differences in bivariate correlations result in larger differences in multiple correlations.

Table 1

Coding of Questions and Frequencies of Responses for Non-Institutionalized Males Aged 25 through 64 in 1974, Not in School Full-time. NORC Amalgam Survey #4189 (N=454).

Variable Name	Question	Coding		Frequency
Race	(V266) CODE WITHOUT ASKING ONLY IF THERE IS NO DOUBT IN YOUR MIND. What race do you consider yourself? RECORD VERBATIM AND CODE.	White	1	87.0%
		Black	0	11.9
		Other	0	1.1
				100.0%
Father's Education	(V235) What is the highest grade in elementary or high school that your (father/stepfather) finished and got credit for?	0 Years	0	6.3%
		1	1	0.0
		2	2	2.1
		3	3	4.2
		4	4	3.1
		5	5	4.5
	(V236) Did he ever get a high school diploma?	6	6	8.7
		7	7	5.2
		8	8	19.2
	(V237) Did he complete one or more years of college for credit? IF YES: How many years did he complete -- not including schooling such as business college, technical or vocational school?	9	9	2.4
		10	10	4.2
		11	11	2.4
		12	12	23.1
		13	13	2.8
		14	14	2.8
		15	15	1.0
		16	16	4.9
		17	17	.7
	(V238) Does he have any college degree?	18	18	1.0
		19	19	1.0
		20 or more	20	0.0
				99.6%
		NA (n=168)		

Table 1

Variable Name	Question	Coding		Frequency
Father's Occupation	(V232) What kind of work did your father normally do while you were growing up? That is, what was his job called? What did he actually do in that job? Tell me, what were some of his main duties? What kind of place did he work for?	0-9	1	11.9%
		10-19	2	46.1
		20-29	3	5.3
		30-39	4	6.1
		40-49	5	10.6
		50-59	6	2.5
		60-69	7	11.1
		70-79	8	.8
		80-89	9	3.9
		90-99	10	1.7
				100.0%
	(The occupation and industry answers to these questions were coded by NORC to (a) three digit census code (b) Hodge-Siegel score (c) Duncan score. The frequencies given here are of the Duncan scores, grouped into ten categories. This variable ranges 3-93 in the version used in the regressions.)	No answer (N=94)		
Father White Collar	(I coded this by reference to V147, the three digit Census Occupation code. Codes in the 100-396 series are White Collar; others, except missing data, are merged into the residual category which thus includes blue collar, service and farmer fathers' occupations.)	Not White Collar	0	75.6%
		White Collar	1	24.4
				100.0%
		No answer (N=94)		

Table 1

Variable Name	Question	Coding		Frequency
Father Absent (V230)	Were you living with both your own mother and father around the time you were 15? IF NO: With whom were you living around that time? (Any answer indicating a father or stepfather was coded to zero. Answers indicating neither father nor stepfather present were coded to one.)	Father	0	80.6%
		No Father	1	19.4
				100.0%
Siblings (V239,V240)	How many brothers and sisters did you have? Count those born alive but no longer living, as well as those alive now. Include stepbrothers and sisters, and children adopted by your parents -- if you grew up with them. (Brothers and sisters were recorded separately, and the numbers added to produce these code values. The apparent wild score of 26 does not affect the regressions, as that case is not among those on which the regressions are run.)		0	5.5%
			1	16.1
			2	16.3
			3	15.2
			4	11.7
			5	9.0
			6	6.8
			7	5.9
			8	4.2
			9	2.4
			10	2.4
			11	1.8
			12	0.9
			13	1.1
			14	0.4
			26	0.2
				100.0%

Table 1

Variable Name	Question	Coding		Frequency
Non-Farm Upbringing	(I coded this from V232, the Census code. The 800 series including farm owning, farm managers and farm laborers was recorded to zero. All others except missing data received the non-farm value of one.)	Farm	0	20.3%
		Non-Farm	1	79.7
				100.0%
		(No Answer = 94)		
Years of Education	(This was coded from three items, V223, V225, V226, in exactly the same fashion as Father's Education. The version of this used in the regression ran from 1 through 20, the code values representing actual years of education.)	0 Years	0	0.2%
		1	1	0.2
		2	2	0.7
		3	3	0.4
		4	4	0.7
		5	5	0.9
		6	6	1.1
		7	7	4.4
		8	8	8.8
		9	9	4.0
		10	10	6.8
		11	11	4.8
		12	12	34.6
		13	13	2.4
		14	14	8.6
		15	15	2.6
		16	16	10.8
		17	17	2.0
		18	18	2.4
		19	19	1.8
		20 or more	20	1.8
				100.0%
		(there were no failures to answer)		
Age (V264)	Age in 1974. In what year were you born? (I subtracted the actual response from 1974 to get a value which ranges 25-64 for the regressions. Data are shown grouped here.)	25-29		15.2%
		30-34		15.4
		35-39		11.7
		40-44		11.5
		45-49		10.1
		50-54		15.4
		55-59		9.7
		60-64		11.0
				100.0%
		(there were no failures to answer)		

Table 1

Variable	Question	Coding	Frequency
Work Experience	Work experience in 1974. In general, Age minus Years of Education minus 6 gives Work Experience. But if Years of Ed. is less than or equal to 8, then Work Experience is calculated as Age - 14. This variable ranges 1-50 in the version used in regressions.)	0-6	4.6%
		7-12	17.0
		13-18	17.0
		19-24	12.6
		25-30	11.7
		31-36	13.0
		37-42	11.9
		43-48	10.4
		49-50	2.0
			100.2%
		(There were no failures to answer)	
Occupation (V144)	(This is a Duncan scale. The notes above on Father's Occupation apply here also. This variable ranges 3-93 in the regressions.)	0-9	10.6%
		10-19	27.3
		20-29	9.9
		30-39	9.7
		40-49	9.2
		50-59	3.4
		60-69	15.5
		70-79	5.9
		80-89	7.0
		90-99	1.6
			100.0%
		No Answer (N = 10)	

Table 1

Variable Name	Question	Coding	Frequency
Annual Earnings (V259)	In which of these groups did your own earnings for last year -- 1972 -- fall? By earnings we mean wages or salary, or income from your own business or profession -- before taxes or other deductions. Just tell me the letter. HAND CARD 21. A. under $1000 B. $1000 to $2000... K. $20,000 to $24,000 L. $25,000 or over. (I assigned the mid-points as the value of the categories, up to $25,000. I assigned $35,000 as the "mid point" of the "$25,000 or over" category.)	Under	3.0%
		$1000-	4.4
		3000-	3.4
		4000-	4.1
		5000-	5.3
		6000-	6.1
		7000-	7.0
		8000-	13.6
		10000-	32.8
		15000-	11.4
		20000-	4.4
		25000	3.9
			100.0%
		No Answer (N = 42)	
Total Family Income (V262)	Just thinking about your family now -- those people in the household who are related to you...In which of these groups did your total family income, from all sources, fall last year--1972-- before taxes, that is? Just tell me the letter. HAND CARD 21, etc. (I treated this variable just as ANNUAL EARNINGS, with one exception. For the regression equations, I assigned the 16 cases who were missing data on TOTAL FAMILY INCOME the same value here as they reported for Annual Earnings.	Under	1.7%
		$1000-	3.1
		3000-	3.6
		4000-	2.2
		5000-	3.4
		6000-	4.1
		7000-	6.0
		8000-	12.3
		10000-	28.7
		15000-	18.3
		20000-	9.6
		25000	7.0
			100.0%
		No Answer (N = 39)	

Table 2

Means and Standard Deviations of 15 Basic Variables for Non-Institutionalized Males Aged 25 through 64 in 1964, Not in School Full-time. Samples taken from NORC Amalgam Survey #4189. Column (1) is based on the n=454 Basic Sample, and none of these variables had any allocated values (column of "N" gives number of these 454 with valid data). Column (2) is based on the n=300 Brothers Samples; so as to have complete data for regression analysis, some of these variables have allocated values. Column 3 is based on the n = 304 who were in the Basic Sample but not in the Brothers.Sample (the Brothers Sample is 150 from Basic Sample, plus 150 brothers), no allocated values in column 3.

	N	MEANS			STANDARD DEVIATIONS		
Variable		(1) Basic	(2) Brothers	(3) Others	(1) Basic	(2) Brothers	(3) Others
Respondent White	454	.870	.933	.839	.337	.250	.368
Father's Education	286	8.832	8.994	8.695	4.343	3.697	4.347
Father's Occupation	360	30.350	29.295	31.044	23.686	20.982	24.416
Father White Collar	360	.244	.207	.250	.430	.405	.434
Father Absent	454	.194	.113	.234	.396	.318	.424
Siblings	454	4.044	4.267	3.934	3.166	2.697	3.371
Non Farm Upbringing	360	.797	.840	.785	.403	.367	.412
Years of Education	454	12.002	12.237	11.783	3.429	3.106	3.536
Age	454	43.192	43.753	43.385	11.694	11.032	12.107
Work Experience	454	24.976	25.413	25.313	13.031	12.085	13.598
Occupation	444	39.009	40.100	37.946	25.494	24.194	25.771
Annual Earnings	412	$11,284	$12,605	$11,177	7014	7621	7208
Earnings$^{1/3}$	412	21.387	22,188	21.271	4.928	5.170	5.004
Ln Earnings	412	9.091	9,193	9.073	.819	.870	.817
Family Income	415	$13,708	$14,777	$13,589	8039	8014	8523

Table 2A: Correlations Among 15 Basic Variables for Non-Institutionalized Males Aged 25 through 64 in 1964, Not in School Full-time. Samples taken from NORC Amalgam Survey #4189. Each cell has two coefficients: the first is based on the n=454 Basic Sample (actual n on which each correlation is based is often less than 454 due to missing data); the second coefficient is based on the n=300 Brothers Sample; see text for further description. See Table 2G for the "brother" correlations (difference scores and intraclass correlations).

	(1) RW	(2) FEd	(3) FOc	(4) FWC	(5) FA	(6) S	(7) NFU	(8) Ed	(9) Age	(10) Exp	(11) Oc
(1) Respondent White											
(2) Father's Education	.106 .020										
(3) Father's Occupation	.131 .077	.516 .518									
(4) Father White Collar	.114 .070	.438 .437	.845 .782								
(5) Father Absent	-.208 -.073	Note 1 -.016	Note 1 .018	Note 1 -.182							
(6) Siblings	-.148 -.202	-.273 -.250	-.234 -.263	-.201 -.173	-.076 -.043						
(7) Non-Farm Upbringing	.031 .029	.240 .154	.366 .326	.287 .223	Note 1 .156	-.173 -.126					
(8) Years of Education	.107 .120	.463 .398	.355 .339	.300 .296	-.119 -.139	-.291 -.356	.313 .142				
(9) Age	.015 .064	-.350 -.332	-.094 -.156	-.107 -.210	.021 .100	.134 .166	-.126 -.056	-.356 -.254			
10) Work Experience	-.006 .037	-.416 -.401	-.166 -.226	-.167 -.264	.045 .123	.189 .233	-.177 -.080	-.544 -.471	.976 .972		
11) Occupation	.149 .139	.267 .291	.310 .338	.299 .294	-.086 -.055	-.268 -.292	.164 .106	.597 .595	-.104 -.066	-.235 -.205	

If Father Absent has any value but 0.0, father's data is missing in the NORC Amalgam Basic Sample. Thus whenever a father's variable (i.e. Father's Education, Father's Occupation, Father White Collar) has valid data, Father Absent is a constant (1.00) and the correlation coefficient between the father's vairable and Father Absent is undefined.

Table 2A: Continued

	(1) RW	(2) FEd	(3) FOc	(4) FWC	(5) FA	(6) Sibs	(7) NFU	(8) Ed	(9) Age	(10) Exp	(11) Oc
(12) Annual Earnings	.185	.155	.221	.193	-.049	-.194	.141	.385	-.010	-.098	.351
	.099	.133	.110	.053	.089	-.150	.009	.303	.015	-.058	.359
(13) Earnings $^{1/3}$	.174	.168	.204	.183	-.053	-.148	.148	.393	-.031	-.117	.339
	.085	.157	.128	.077	.082	-.169	.045	.356	-.051	-.130	.356
(14) Ln Earnings	.148	.162	.176	.163	-.051	-.101	.137	.361	-.040	-.116	.300
	.066	.163	.124	.085	.073	-.167	.059	.356	-.095	-.170	.318
(15) Family Income	.139	.180	.213	.175	-.095	-.149	.130	.380	-.038	-.122	.376
	.050	.084	.056	.022	.057	-.119	.004	.278	.056	-.014	.299

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Table 2A:

	(12) AE	(13) $E^{1/3}$	(14) LnE	(15) FI
(12) Annual Earnings				
(13) Earnings $^{1/3}$	.934 .928			
(14) Ln Earnings	.835 .8[illegible]6	.974 .971		
(15) Family Income	.830 .8[illegible]8	.783 .796	.703 .691	

Table 2F

Comparisons of NORC men aged 36-75 with OCG men aged 25-64. Data from the "Basic" sample (see OCG table 2, "Full Sample")

	Mean		Standard Deviation	
	NORC	OCG	NORC	OCG
Respondent White	.876	.904	.330	.295
Father's Education	7.704	7.726	4.695	4.020
Father's Occupation	28.631	26.913	22.744	20.942
Father White Collar	.227	.234	.420	.423
Father Absent	.178	.137	.383	.344
Years of Education	10.911	10.690	3.799	3.745
Occupation	36.581	37.477	24.069	24.621
N	394	18074		

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Table 2G: Correlations among those variables for which values are available for each brother. The units are the 150 pairs of brothers making up the NORC Brothers Sample. The upper figure in each cell is the correlation of two difference scores, e.g. the difference in the brothers' Ages correlated with the difference in their Years of Education over the 150 families. The lower figure in each cell is the correlation of one brother's score with the other brother's score, e.g. one brother's Education with his brother's Age, Years of Education, etc., over the 150 families. These are intraclass correlation coefficients. See Table 2B for ordinary correlations for the NORC Basic and Brothers Samples.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) Years of Education	1.000 .528							
(2) Age	-.302 -.155	1.000 .771						
(3) Work Experience	-.577 -.271	.950 .742	1.000 .744					
(4) Occupation	.355 .401	-.046 -.049	-.157 -.143	1.000 .371				
(5) Annual Earnings	.184 .183	-.010 .020	-.066 -.026	.178 .225	1.000 .106			
(6) Earnings$^{1/3}$	.265 .189	-.131 .007	-.195 -.039	.159 .240	.914 .131	1.000 .150		
(7) Ln Earnings	.288 .171	-.208 -.002	-.268 -.043	.119 .230	.776 .131	.963 .142	1.000 .129	
(8) Family Income	.161 .165	-.054 .082	-.096 .035	.183 .153	.869 .037	.819 .033	.717 .015	1.000 -.022

Table 3A

Respondent Characteristics by Level of Father's Education, for Non-Institutionalized Males Aged 25-64 in 1974, Not in School Full-time. NORC Amalgam Survey #4189 (n=454)

Years of Father's Education	N	Years of Education		Occupation		Annual Earnings		Earnings$^{1/3}$		Ln Earnings		Family Income	
		MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV
Total	454	12.002	3.429	39.009	25.494	11284	7014	21.387	4.928	9.091	0.819	13465	8021
0-4	45	9.489	3.415	28.244	19.971	8186	4773	19.070	4.922	8.717	0.957	10885	7482
5-7	53	12.623	2.982	39.132	24.753	12030	7011	21.930	4.921	9.169	0.825	14596	8310
8	55	12.382	2.684	45.377	26.217	12108	8224	21.812	5.236	9.146	0.842	13694	7786
9-11	26	13.269	2.779	47.320	28.954	13870	9365	23.018	4.949	9.342	0.652	16000	8780
12	66	13.091	2.528	44.698	25.278	12069	6902	22.032	4.702	9.193	0.774	13197	7340
13-15	19	14.895	2.685	53.889	27.326	14250	9274	23.176	5.221	9.353	0.710	18474	11451
16	14	14.857	2.033	47.214	28.192	13577	9067	22.489	6.137	9.199	1.048	17036	11348
17 +	8	15.250	2.605	65.500	23.476	11500	4660	22.180	3.195	9.269	0.443	17563	9065
NA	168	11.012	3.603	32.824	23.188	10168	5854	20.714	4.659	8.999	0.799	12229	6934
Eta^2		.179		.097		.050		.045		.038		.055	
Number Reporting Dependent Variable		454		444		412		412		412		431	

Table 3B: Regressions of Respondent Outcomes on Father's Education for Non-Institutionalized Males Aged 25 through 64 in 1964, Not in School Full-time. NORC Amalgam Survey #4189 Complete Data Sample (N=300)

	Father's Education	Father's Education^2	Father not at home	MD Dummy^1	Constant	R^2	Residual S.D.
Education	.3342 (.0447)				9.2305	.1583	2.8542
	[.0886] (.1375)	[.0135] (.0072)	-1.0946 (.5248)		10.2907	.1856	2.8170
	[.1287] (.1432)	[.0112] (.0075)	-1.2150 (.5383)	[-0.4735] (.4708)	10.2341	.1884	2.8169
Occupation	1.9014 (.3628)				22.9985	.0844	23.1889
	[.1884] (1.1294)	[.0943] (.0591)	[-2.4020] (4.3102)		29.7625	.0948	23.1353
	[.8237] (1.1703)	[.0584] (.0616)	[-4.3100] (4.4001)	-7.5049 (3.8487)	28.8663	.1063	23.0265
Annual Earnings	274.00 (118.35)				10.1407	.0177	7565.63
	[320.17] (368.99)	[-2.39] (19.30)	[2151.30] (1408.22)		9707.20	.0260	7558.78
	[519.36] (382.56)	[-13.67] (20.15)	[1553.01] (1438.33)	[-2353.24] (1258.07)	9426.18	.0374	7527.08
Earnings$^{1/3}$	.2193 (.0800)				20.2152	.0246	5.1149
	[.2407] (.2496)	[-.0011] (.0131)	[1.3542] (.9526)		19.9710	.0317	5.1134
	[.3397] (.2595)	[-.0067] (.0137)	[1.0571] (.9757)	[-1.1687] (.8534)	19.8315	.0378	5.1059

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Table 3B: continued

	Father's Education	Father's Education^2	Father not at home	MD Dummy[1]	Constant	R^2	Residual S.D.
Ln Earnings	.0385 (.0134)				8.8467	.0267	.8593
	[.0437] (.0420)	[-.0003] (.0022)	[.2024] (.1602)		8.8027	.0325	.8597
	[.0561] (.0437)	[-.0010] (.0023)	[.1649] (.1643)	[-.1473] (.1437)	8.7851	.0359	.8596
Family Income	[185.09] (126.54)				13111.98	.0071	8088.97
	[-332.39] (394.25)	[28.69] (20.63)	[1919.53] (1504.60)		14836.93	.0169	8076.14
	[-257.47] (410.87)	[24.45] (21.64)	[1694.49] (1544.73)	[-885.17] (1351.15)	14731.22	.0184	8083.94

1. The MD Dummy has value 1.00 if the mean was allocated for missing data on Father's Education, and is 0.00 otherwise.

Coefficients in brackets are less than 1.96 times their standard errors.

Table 4A

Respondent Characteristics by Level of Father's Occupation, for Non-Institutionalized Males Aged 25-64 in 1974, Not in School Full-time. NORC Amalgam Survey #4189 (n=454)

Level of Father's Occupation	N	Years of Education		Occupation		Annual Earnings		$\text{Earnings}^{1/3}$		Ln Earnings		Family Income	
		MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV
Total	454	12.002	3.429	39.009	25.494	11284	7014	21.387	4.928	9.091	0.819	13465	8021
0-9	43	10.512	3.494	31.209	25.539	9444	6450	20.115	4.723	8.914	0.781	12397	9010
10-19	166	11.566	3.212	34.776	23.849	10371	6209	20.772	4.905	8.994	0.869	12503	6902
20-29	19	13.000	3.162	43.947	23.607	12763	8750	22.313	5.078	9.236	0.728	14684	8309
30-39	22	11.955	2.768	38.182	22.570	9868	3800	21.004	3.270	9.094	0.527	12700	5118
40-49	38	13.105	3.100	47.027	25.480	13014	6525	22.727	4.526	9.295	0.740	15622	8624
50-59	9	14.222	3.492	59.000	27.464	13556	8342	23.224	3.914	9.402	0.460	15500	8566
60-69	40	13.550	2.660	54.282	24.055	14864	9662	23.463	5.371	9.376	0.797	16824	9925
70-79	3	13.333	2.309	31.333	13.013	14167	2887	24.126	1.590	9.546	0.195	15833	5774
80-89	14	15.000	2.717	53.000	32.231	15536	10148	23.561	6.325	9.340	1.045	17393	11186
90-96	6	15.667	2.422	61.333	27.890	9833	5241	20.798	4.030	9.055	0.602	16917	11993
NA	94	11.223	3.745	34.402	23.906	10588	6488	20.898	4.953	9.017	0.836	12128	7392
Eta^2		.113		.100		.061		.049		.036		.048	
Number Reporting Dependent Variable		454		444		412		412		412		431	

Table 4B: Regressions of Respondent Outcomes on Father's Occupation for Non-Institutionalized Males Aged 25 through 64 in 1964, Not in School Full-time. NORC Amalgam Survey #4189 Complete Data Sample (N=300 cases)

	Father's Occupation	Father's Occupation^2	Father not at home	MD Dummy^1	Constant	R^2	Residual S.D.
Education	.0502 (.0081)				10.7655	.1151	2.9265
	[.0443] (.0296)	[.0001] (.0003)	-1.3819 (.5582)		10.9969	.1364	2.9009
	[.0467] (.0297)	[.0001] (.0004)	-1.4114 (.5592)	[-1.9408] (2.0675)	10.9799	.1389	2.9015
Occupation	.3896 (.0629)				28.6869	.1142	22.8091
	[.4580] (.2330)	[-.0008] (.0027)	[-5.0816] (4.3937)		28.3103	.1182	22.8343
	.4837 (.2336)	[-.0011] (.0027)	[-5.3980] (4.3960)	[-20.7803] (16.2532)	28.1288	.1230	22.8099
Annual Earnings	[40.13] (20.91)				11429.38	.0122	7586.63
	[148.75] (77.09)	[-1.32] (.90)	[1401.15] (1453.79)		9799.23	.0269	7555.37
	[148.87] (77.51)	[-1.32] (.90)	[1399.63] (1458.57)	[-100.37] (5392.71)	9798.35	.0269	7568.16
Earnings$^{1/3}$	.0314 (.0142)				21.2665	.0163	5.1367
	.1057 (.0522)	[-.0009] (.0006)	[.8225] (.9849)		20.1667	.0298	5.1184
	[.1049] (.0525)	[-.0009] (.0006)	[.8325] (.9881)	[.6510] (3.6531)	20.1724	.0299	5.1268

Table 4B: continued

	Father's Occupation	Father's Occupation^2	Father not at home	MD Dummy[1]	Constant	R^2	Residual S.D.
Ln Earnings	.0051				9.0423	.0153	.8643
	(.0024)						
	[.0156]	[-.0001]	[.1267]		8.8855	.0254	.8628
	(.0088)	(.0001)	(.1660)				
	[.0154]	[-.0001]	[.1293]	[.1689]	8.8869	.0257	.8641
	(.0089)	(.0001)	(.1665)	(.6157)			
Family Income	[21.66]				14142.22	.0031	8105.18
	(22.34)						
	[92.48]	[-.86]	[971.41]		13073.06	.0089	8108.94
	(82.74)	(.96)	(1560.31)				
	[91.96]	[-.85]	[977.79]	[418.97]	13076.72	.0089	8122.60
	(83.19)	(.97)	(1565.42)	(5787.77)			

1. The MD Dummy has value 1.00 if the mean was assigned for missing data on Father's Occupation, and is 0.00 otherwise.

Coefficients in brackets are less than 1.96 times their standard errors.

Table 5A

Respondent Characteristics by Number of Siblings, for Non-Institutionalized Males Aged 25-64 in 1974, Not in School Full-time. NORC Amalgam Survey #4189 (n=454)

Number of Siblings	N	Years of Education		Occupation		Annual Earnings		$\text{Earnings}^{1/3}$		Ln Earnings		Family Income	
		MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV
Total	454	12.002	3.429	39.009	25.494	11284	7014	21.387	4.928	9.091	0.819	13465	8021
0	25	12.520	3.057	36.167	26.378	15286	10759	22.933	7.268	9.200	1.222	17000	10383
1	73	13.904	3.141	51.380	28.071	13437	8432	22.570	5.535	9.235	0.910	14862	9338
2	74	12.892	3.271	47.099	25.916	11515	6556	21.640	4.785	9.129	0.826	13789	7640
3	69	12.391	3.388	40.597	24.409	11627	6603	21.744	4.693	9.151	0.784	14303	8957
4	53	10.792	3.660	33.547	22.639	9980	5499	20.677	4.415	9.008	0.735	12180	6425
5	41	11.902	2.791	34.171	21.661	12188	7054	22.038	4.954	9.179	0.856	14805	7250
6	31	11.065	3.296	37.968	24.883	7759	4266	19.095	3.813	8.787	0.626	9914	4713
7	27	10.667	2.572	33.769	22.523	9815	4882	20.689	4.136	9.015	0.734	11148	5834
8	19	9.684	4.042	23.421	18.106	10853	9738	20.723	5.564	8.999	0.770	12382	9471
9 +	42	10.405	2.829	25.878	20.622	8973	3993	20.167	3.756	8.947	0.681	11676	6653
Eta^2		.132		.107		.067		.041		.022		.047	
Number Reporting Dependent Variable		454		444		412		412		412		431	

Table 5B: Regressions of Respondent Outcomes on Number of Siblings for Non-Institutionalized Males Aged 25 through 64 in 1964, Not in School Full-time. NORC Amalgam Survey #4189 Complete Data Sample (N=300)

	Number of Siblings	Number of Siblings^2	Constant	R^2	Residual S. D.
Education	-.4097 (.0624)		13.9847	.1266	2.9075
	-.6917 (.2134)	[.0252] (.0183)	14.5457	.1321	2.9031
Occupation	-2.6197 (.4970)		51.2774	.0853	23.1779
	-4.1649 (1.7043)	[.1382] (.1458)	54.3515	.0880	23.1819
Annual Earnings	-423.70 (161.84)		14412.77	.0225	7547.07
	[-919.77] (544.96)	[44.38] (47.49)	15399.72	.0254	7548.67
Earnings$^{1/3}$	-.3248 (.1095)		23.5731	.0287	5.1041
	[-.4339] (.3758)	[.0098] (.0322)	23.7902	.0290	5.1119
ln Earnings	-.0539 (.0184)		9.4225	.0280	.8588
	[-.0475] (.0632)	[-.0006] (.0054)	9.4098	.0280	.8602
Family Income	-357.36 (172.85)		16301.39	.0141	8060.35
	[-903.68] (592.65)	[48.88] (50.71)	17388.31	.0172	8061.31

Coefficients in brackets are less than 1.96 times their standard errors.

Table 6

Respondent Characteristics by Race of Respondent, for Non-Institutionalized Males Aged 25-64 in 1974, Not in School Full-time. NORC Amalgam Survey #4189 (n=454)

Race of Respondent	N	Years of Education		Occupation		Annual Earnings		Earnings$^{1/3}$		Ln Earnings		Family Income	
		MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV
Total	454	12.002	3.429	39.009	25.494	11284	7014	21.387	4.928	9.091	0.819	13465	8021
WHITE	395	12.144	3.356	40.499	25.394	11783	7217	21.716	4.963	9.137	0.819	13908	8178
BLACK	54	11.074	3.560	27.667	22.345	7878	4216	19.082	4.187	8.759	0.779	10549	6356
OTHER	5	10.800	6.261	46.800	37.891	8250	2872	20.027	2.164	8.979	0.311	10000	3937
Eta^2		.012		.028		.034		.031		.023		.021	
Number Reporting Dependent Variable		454		444		412		412		412		431	

Table 7A

Respondent Characteristics by Respondent's Age, for Non-Institutionalized Males Aged 25-64 in 1974, Not in School Full-time. NORC Amalgam Survey #4189 (n=454)

Respondent's Age	N	Years of Education		Occupation		Annual Earnings		$\text{Earnings}^{1/3}$		Ln Earnings		Family Income	
		MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV
Total	454	12.002	3.429	39.009	25.494	11284	7014	21.387	4.928	9.091	0.819	13465	8021
25-29	69	13.101	2.771	38.000	26.166	9945	6511	20.387	5.075	8.924	0.933	12758	8659
30-34	70	13.086	2.512	43.143	28.970	11356	6251	21.760	4.044	9.186	0.587	13346	7983
35-39	53	13.302	3.196	44.558	26.094	13174	8013	22.519	5.284	9.239	0.868	14860	8086
40-44	52	12.846	3.392	40.816	25.706	11951	5981	22.055	4.470	9.206	0.724	14069	5860
45-49	46	12.000	3.399	41.630	23.683	12148	8024	21.895	5.103	9.167	0.793	15167	8804
50-54	70	11.114	3.508	36.485	24.371	11462	7976	21.501	4.852	9.123	0.728	13051	8536
55-59	44	9.864	3.137	31.023	19.946	10514	6201	20.754	5.254	8.983	0.896	13095	8389
60-64	50	9.840	3.716	34.900	24.734	9756	6580	20.059	5.527	8.848	1.037	11689	7171
Eta^2		.147		.026		.022		.025		.026		.016	
Number Reporting Dependent Variable		454		444		412		412		412		431	

Table 7B: Regressions of Respondent Outcomes on Respondent's Age for Non-Institutionalized Males Aged 25 through 64 in 1964, Not in School Full-time. NORC Amalgam Survey #4189
Complete Data Sample (n=300)

	Respondent's Age	Respondent's Age^2	Constant	R^2	Residual S. D.
Education	-.0717		15.3716	.0648	3.0086
	(.0158)				
	-.0810	[.0001]	15.5379	.0651	3.0131
	(.0329)	(.0004)			
Occupation	[-.1457]		46.4765	.0044	24.1807
	(.1268)				
	[-.2976]	[.0020]	49.1718	.0059	24.2039
	(.2644)	(.0031)			
Annual Earnings	[10.63]		12139.99	.0002	7632.46
	(40.01)				
	[-41.87]	[.70]	13071.70	.0020	7638.69
	(83.43)	(.98)			
$Earnings^{1/3}$	[-.0238]		23.2270	.0026	5.1723
	(.0271)				
	[-.0966]	[.0010]	24.5203	.0098	5.1622
	(.0564)	(.0007)			
Ln Earnings	[-.0075]		9.5209	.0091	.8671
	(.0046)				
	-.0230	[.0002]	9.7965	.0207	.8634
	(.0094)	(.0001)			
Family Income	[40.98]		12983.49	.0031	8105.31
	(42.49)				
	[-85.31]	[1.69]	15224.68	.0120	8082.84
	(88.28)	(1.03)			

Coefficients in brackets are less than 1.96 times their standard errors.

Table 9A

Respondent Characteristics by Respondent's Education, for Non-Institutionalized Males Aged 25-64 in 1974, Not in School Full-time. NORC Amalgam Survey #4189 (n=454)

Respondent's Education	N		Occupation		Annual Earnings		Earnings$^{1/3}$		Ln Earnings		Family Income	
			MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV	MEAN	STD DEV
Total	454		39.009	25.494	11284	7014	21.387	4.928	9.091	0.819	13465	8021
0-7	39		16.667	10.261	6544	6217	17.370	4.943	8.442	0.890	8311	6544
8	40		27.800	20.744	8214	5040	18.972	5.211	8.681	1.039	9784	5817
9-11	71		25.043	16.860	10097	6149	20.627	4.754	8.982	0.830	11914	7204
12	157		35.497	20.580	10762	5327	21.432	3.859	9.137	0.625	13101	6522
13-15	62		47.067	25.226	12362	7301	22.158	4.864	9.205	0.795	13942	7795
16	49		63.708	22.731	14920	9130	23.384	5.747	9.339	0.925	18333	9718
17 +	36		73.294	15.720	17029	7930	25.177	3.782	9.645	0.451	19528	9539
Eta^2		.951	.393		.148		.149		.128		.149	
Number Reporting Dependent Variable		454	444		412		412		412		431	

Table 9B: Regressions of Respondent Outcomes on Years of Education for Non-Institutionalized Males Aged 25 through 64 in 1964, Not in School Full-time. NORC Amalgam Survey #4189 Complete Data Sample (n=300)

	Years of Education	Years of Higher Education	College Graduation	Constant	R^2	Residual S. D.
Occupation	4.6338			-16.6027	.3539	19.4802
	(.3627)					
	3.2601	[2.1168]	[1.5931]	-2.5881	.3661	19.3603
	(.6841)	(1.5414)	(6.7696)			
Annual Earnings	743.20			3510.67	.0918	7274.77
	(135.46)					
	756.16	[-438.43]	[2510.51]	3400.79	.0947	7287.37
	(257.48)	(580.21)	(2548.14)			
$Earnings^{1/3}$	.5933			14.9278	.1270	4.8389
	(.0901)					
	.7898	[-.5318]	[1.1540]	12.9354	.1335	4.8372
	(.1709)	(.3851)	(1.6914)			
Ln Earnings	.0997			7.9719	.1269	.8139
	(.0152)					
	.1506	[-.1110]	[.1375]	7.4545	.1401	.8104
	(.0286)	(.0645)	(.2834)			
Family Income	724.24			5914.36	.0770	7799.01
	(145.22)					
	640.13	[-537.27]	[4122.41]	6808.11	.0847	7792.83
	(275.34)	(620.46)	(2724.88)			

Coefficients in brackets are less than 1.96 times their standard errors.

Table 10: Regressions of Respondent Outcomes on Education and Work Experience for Non-Institutionalized Males Aged 25 through 64 in 1964 in 1964, Not in School Full-time. NORC Amalgam Survey #4189 Complete Data Sample (n=300)

	Years of Education	Years of Higher Education	College Graduation	Work Experience	Work Experience^2	Constant	R^2	Residual S.D.
Occupation	3.6642	[1.8648]	[2.2613]	[.1759]		-11.8303	.3720	19.3020
	(.7236)	(1.5442)	(6.7611)	(.1053)				
	3.6561	[1.8669]	[2.3087]	[.1533]	[.0005]	-11.5465	.3721	19.3340
	(.7267)	(1.5468)	(6.7794)	(.1818)	(.0034)			
Annual Earnings	921.94	[-541.81]	[2784.62]	[72.16]		-390.66	.1048	7258.95
	(272.13)	(580.72)	(2542.65)	(39.59)				
	917.87	[-540.76]	[2808.52]	[60.75]	[.26]	-247.64	.1049	7270.76
	(273.29)	(581.69)	(2549.46)	(68.35)	(1.28)			
Earnings$^{1/3}$	.8476	[-.5678]	[1.2496]	[.0252]		11.6129	.1362	4.8379
	(.1814)	(.3870)	(1.6946)	(.0264)				
	.8371	[-.5651]	[1.3113]	[-.0043]	[.0007]	11.9817	.1380	4.8410
	(.1820)	(.3873)	(1.6975)	(.0455)	(.0009)			
Ln Earnings	.1523	[-.1120]	[.1402]	[.0007]		7.4176	.1401	.8118
	(.0304)	(.0649)	(.2844)	(.0044)				
	.1498	[-.1114]	[.1547]	[-.0062]	.0002	7.5045	.1438	.8114
	(.0305)	(.0649)	(.2845)	(.0076)	(.0001)			
Family Income	878.50	[-685.92]	[4516.57]	103.76		1356.30	.1031	7727.03
	(289.68)	(618.17)	(2706.62)	(42.14)				
	845.89	[-677.51]	[4708.11]	[12.30]	[2.10]	2502.68	.1104	7708.75
	(289.76)	(616.73)	(2703.04)	(72.47)	(1.36)			

Coefficients in brackets are less than 1.96 times their standard errors.

Table 13A: Regressions of Respondent's Education on Family Background and Age for Non-Institutionalized Males Aged 25 through 64 in 1964, Not in School Full-time.

Version 2 NORC Amalgam Survey #4189 Complete Data Sample (n=300)

INDEPENDENT VARIABLE	r	1 B (S.E.)	1 beta	3 B (S.E.)	3 beta	D3[1] B (S.E.)	D3[1] beta
Respondent White	.120	[.505] (.642)	.041	[.669] (.647)	.054		
Father's Education	.398	.221 (.050)	.263	.190 (.053)	.226		
Father's Occupation	.339	[.017] (.013)	.114	[.021] (.014)	.139		
Father White Collar	.296	.021 (.652)	.003	[-.115] (.654)	-.015		
Father Absent	-.139	-1.524 (.535)	-.156	-1.392 (.538)	-.142		
Non Farm Upbringing	.142	[.485] (.466)	.057	[.410] (.468)	.048		
Siblings	-.356	-.286 (.063)	-.248	-.275 (.063)	-.239		
Missing Data Dummy[3]	-.075	[-.132] (.448)	-.016	[.086] (.463)	.010		
Age	-.255 -.302			[-.029] (.030)	-.103	-.122 (.032)	-.302
Age[2]	-.215			[-.00003] (.0004)	-.008		
Constant		10.288		11.618		.000	
Multiple R^2		.268		.278		.091	
S.D. of Residual		2.693		2.685		2.890	
S.D. of Dependent Variable		3.106		3.106		3.022	

1. The "D" models use brother-difference variables, thus "controlling" family.
2. The second correlation is of the brother difference variables.
3. This variable has value 1.00 if the mean was allocated for missing data on any of the father's variables; and is 0.00 otherwise.

Coefficients in brackets are less than 1.96 times their standard errors.

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Table 14A: Regressions of Respondent's Occupation on Background, Age and Education for Non-Institutionalized Males Aged 25 through 64 in 1964, Not in School Full-time. NORC Amalgam Survey #4189
Complete Data Sample (LN=300)

Version 2

INDEPENDENT VARIABLE	r	3 B (S.E.)	3 beta	6 B (S.E.)	6 beta	D3[1] B (S.E.)	D3[1] beta	D6[1] B (S.E.)	D6[1] beta
Respondent White	.139	[6.021] (5.341)	.062	[4.301] (4.601)	.044				
Father's Education	.291	1.035 (.435)	.158	[.209] (.386)	.032				
Father's Occupation	.338	[.162] (.112)	.141	[.069] (.097)	.060				
Father White Collar	.294	[3.940] (5.399)	.066	[4.335] (4.631)	.073				
Father Absent	-.055	[-5.268] (4.440)	-.069	[-.525] (3.870)	-.007				
Non-Farm Upbringing	.106	[1.334] (3.865)	.020	[.914] (3.354)	.014				
Siblings	-.292	-1.672 (.521)	-.186	[-.599] (.462)	-.067				
Age	-.066 -.046[2]	[.070] (.248)	.032	[.120] (.215)	.055	[-.167] (.298)	-.046	[.144] (.294)	.040
Age^2	-.040	[.001] (.003)	.048	[.002] (.003)	.075				
Missing Data Dummy[3]	-.137	[-5.196] (3.820)	-.080	[-5.856] (3.269)	-.090				
Years of Education	.595 .355[2]			2.676 (.747)	.344			[1.457] (1.112)	.162
Years of Higher Education	.563 .387[2]			[2.871] (1.568)	.250			[3.778] (2.127)	.272
College Graduation	.511 .283[2]			[-2.008] (6.871)	-.032			[-.223] (9.088)	.003
Constant		21.615		-10.669		.000		.000	
Multiple R^2		.189		.413		.002		.160	
S.D. of Residuals		22.163		18.952		27.247		25.253	
S.D. of Dependent Variable		24.194		24.194		27.184		27.184	

1. The "D" models use brother-difference variables, thus "controlling" family.
2. The second correlation is of the brother difference variables.
3. This variable has value 1.00 if the mean was allocated for missing data on any of the father's variables; and is 0.00 otherwise.

Coefficients in brackets are less than 1.96 times their standard errors.

Table 15A: Regressions of Respondent's Earnings on Background, Age, Education and Occupation for Non-Institutionalized Males Aged 25 through 64 in 1964, Not in School Full-time. NORC Amalgam Survey #4189 Complete Data Sample (n=300)

Version 2

INDEPENDENT		3		6		9		D6^{1}		D9^{1}	
VARIABLE	r	B (S.E.)	beta	B (S.E.)	beta	B (S.E.)	beta	B (S.E.)	beta	B (S.E.)	beta
Respondent White	.099	[1995] (1813)	.065	[1319] (1757)	.043	[958] (1719)	.031				
Father's Education	.133	[268] (148)	.130	[92] (147)	.045	[75] (144)	.036				
Father's Occupation	.110	[16] (38)	.045	[2] (37)	.006	[-4] (36)	-.010				
Father White Collar	.053	[-663] (1832)	-.035	[-171] (1768)	-.033	-1075 (1731)	-.057				
Father Absent	.089	[1657] (1507)	.069	[2897] (1478)	.121	2941 (1444)	.123				
Non Farm Upbringing	.009	[-557] (1312)	-.027	[-915] (1281)	-.044	[-992] (1252)	-.048				
Siblings	-.150	[-260] (177)	-.092	[-24] (177)	-.008	[27] (173)	.010				
Age	.015 -.010^{2}	[6] **(84)**	.009	[28] (82)	.040	[18] (80)	.026	[73] (118)	.054	[66] (118)	.048
Age^{2}	.033	[.64] (.99)	.080	[.69] (.96)	.085	[.53] (.94)	.065				
Missing Data Dummy^{3}	-.113	[-1690] (1296)	-.083	[-1745] (1248)	-.085	[-1253] (1227)	-.061				
Years of Education	.303 .184^{2}			898 (285)	.366	673 (285)	.274	[716] (447)	.212	[644] (448)	.191
Years Higher Education	.257 .137^{2}			[-624] (599)	-.173	[-865] (588)	-.240	[-1] (855)	-.0003	[-190] (861)	-.036
College Graduation	.253 .085^{2}			[2886] (2624)	.148	[3054] (2564)	.156	[-657] (3654)	-.022	[-646] (3639)	-.022
Occupation	.359 .178^{2}					84 (2[illegible])	.267			[50] (33)	.133
Constant		8153		-1890		-99		0		0	
R^{2}		.059		.137		.179		.037		.051	
S.D. of Residual		7521		7237		7072		10154		10110	
S.D. of Dep. Variable		7620		7620		7620		10206		10206	

1. The "D" models use brother-difference variables, thus "controlling" family.
2. The second correlation is of the brother difference variables.
3. This variable has value 1.00 if the mean was allocated for missing data on any of the father's variables; and is 0.00 otherwise.

Coefficients in brackets are less than 1.96 times their standard errors.

Table 16A: Regressions of Ln Earnings on Background, Age, Education and Occupation for Non-Institutionalized Males Aged 25 through 64 in 1964, Not in School Full-time. NORC Amalgam Survey #4189:
Complete Data Sample (n=300)

Version 2

INDEPENDENT VARIABLE	r	3 B (S.E.)	3 beta	6 B (S.E.)	6 beta	9 B (S.E.)	9 beta	D6[1] B (S.E.)	D6[1] beta	D9[1] B (S.E.)	D9[1] beta
Respondent White	.066	[.133] (.206)	.038	[.022] (.197)	.006	[-.007] (.195)	-.002				
Father's Education	.163	[.029] (.017)	.124	[.010] (.017)	.043	[.009] (.016)	.037				
Father's Occupation	.124	[.0003] (.004)	.007	[-.001] (.004)	-.035	[-.002] (.004)	-.047				
Father White Collar	.085	[.013] (.209)	.006	[.022] (.198)	.010	[-.007] (.196)	-.003				
Father Absent	.073	[.209] (.171)	.076	.392 (.165)	.143	.396 (.164)	.145				
Non-Farm Upbringing	.059	[.042] (.149)	.018	[-.045] (.143)	-.019	[-.051] (.142)	-.022				
Siblings	-.167	[-.031] (.020)	-.097	[-.0002] (.020)	-.0005	[.004] (.020)	.012				
Age	-.095 -.208[2]	[-.019] (.010)	-.235	[-.013] (.009)	-.168	[-.014] (.009)	-.178	[-.017] (.013)	-.111	[-.017] (.013)	-.113
Age^2	-.032	.0002 (.0001)	.222	.0002 (.0001)	.204	.0002 (.0001)	.190				
Missing Data Dummy[3]	-.062	[-.043] (.148)	-.018	[-.041] (.140)	-.017	[-.001] (.139)	-.0003				
Years of Education	.356 .288[2]			.157 (.032)	.562	.139 (.032)	.497	.156 (.048)	.410	.152 (.049)	.400
Years Higher Education	.244 .121[2]			[-.124] (.067)	-.300	[-.143] (.067)	-.347	[-.109] (.092)	-.186	[-.118] (.093)	-.201
College Graduation	.227 .051[2]			[.184] (.294)	.083	[.198] (.291)	.089	[-.085] (.394)	-.026	[-.084] (.395)	-.026
Occupation	.318 .119[2]					.007 (.003)	.189			[.002] (.004)	.057
Constant		9.290		7.519		7.592		.000		.000	
R^2		.064		.170		.191		.117		.120	
S.D. of Residuals		.856		.810		.801		1.095		1.097	
S.D. of Dependent Var.		.870		.870		.870		1.150		1.150	

1. The "D" models use brother-difference variables, thus "controlling" family.
2. The second correlation is of the brother difference variables.
3. This variable has value 1.00 if the mean was allocated for missing data on any of the father's variables; and is 0.00 otherwise.

Coefficients in brackets are less than 1.96 times their standard errors.

Table 18A: Regressions of Family Income on Background, Age, Education and Occupation for Non-Institutionalized Males Aged 25 through 64 in 1964, Not in School Full-time. NORC Amalgam Survey #4189:

Version 2

Complete Data Sample (n=300)

INDEPENDENT		3		6		D3[1]		D6[1]	
VARIABLE	r	B (S.E.)	beta	B (S.E.)	beta	B (S.E.)	beta	B (S.E.)	beta
Respondent White	.050	[356] (1945)	.011	[-352] (1877)	-.011				
Father's Education	.084	[261] (158)	.119	[48] (158)	.022				
Father's Occupation	.056	[-8] (41)	-.022	[-23] (39)	-.059				
Father White Collar	.022	[-143] (1965)	-.007	[-323] (1889)	-.016				
Father Absent	.057	[893] (1616)	.035	[2198] (1579)	.086				
Non-Farm Upbringing	.004	[-44] (1407)	-.002	[-288] (1369)	-.013				
Siblings	-.119	[-260] (190)	-.087	[-1] (189)	.0004				
Age	.056 -.054[2]	[-46] (90)	-.063	[-32] (88)	-.044	[-84] (127)	-.054	[-11] (135)	-.007
Age^2	.094	[2] (1)	.204	[2] (1)	.221				
Missing Data Dummy[3]	-.067	[-1579] (1391)	-.073	[-1668] (1334)	-.077				
Years of Education	.278 .161[2]			858 (305)	.329			[695] (511)	.181
Years of Higher Education	.248 .114[2]			[-827] (640)	-.215			[-430] (977)	-.073
College Graduation	.259 .104[2]			[5271] (2803)	.254			[2152] (4175)	.064
Constant		12277		2894		0		0	
R^2		.042		.129		.003		.028	
S.D. of Residuals		8068		7732		11630		11602	
S.D. of Dep. Var.		8104		8104		11608		11608	

1. The "D" models use brother-difference variables, thus "controlling" family.
2. The second correlation is of the brother difference variables.
3. This variable has value 1.00 if the mean was allocated for missing data on any of the father's variables; and is 0.00 otherwise.

Coefficients in brackets are less than 1.96 times their standard errors.

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Appendix F: THE 1966 NATIONAL LONGITUDINAL SURVEY OF OLDER MEN

By Sherry Ward

The National Longitudinal Surveys are a joint project of the Census Bureau and the Center for Human Resource Research (CHRR) of the Ohio State University. They were designed to study the labor market experience of four groups in the United States population: young men and women 14 to 24 years of age, women 30 to 44 years of age, and men 45 to 59 years old. This chapter examines the 45-59 year old men. CHRR selected this group because men of this age seemed to face several special problems: declining health, skill obsolescence, and age discrimination. In examining these issues, the NLS collected extensive information on family background, past and present work experience, present socio-economic status, financial characteristics, and various attitudinal measures.

The Census Bureau has surveyed these men five times in a six year period. The first interviewers went into the field in May of 1966. The survey was repeated in the spring of 1967. A short mail questionnaire was sent in 1968. The sample was reinterviewed in the summers of 1969 and 1971. The design and analysis of the study were the responsibility of CHRR. Sampling, field work, and data processing were completed by the Census Bureau.

Sampling

The Census Bureau drew a national probability sample of 5020 men aged 45-59 in 1966 using a multi-stage procedure that selected a probability sample of housing units within each of 235 primary sampling units. An initial screening procedure, in which 98 percent of the original households were contacted, produced a group of 5518 men between the ages of 45 to 59 who were designated as possible interviewees. 91 percent of this group (i.e. 5020 men) were eventually interviewed. By 1971, 17 percent of those interviewed in 1966 had been lost. The sus Bureau attributed half of the loss to death and the other half either to refusal or to inability to locate the respondent.

Respondents were sampled differentially within four strata: whites in white enumeration districts, blacks in white districts, whites in black districts and blacks in black districts. Blacks were deliberately over-sampled. Each respondent was first assigned a weight equal to the reciprocal of his final probability of selection. The Census Bureau then made further adjustments to account for 1) differences between the NLS and 1960 Census with respect to race in each of the four major regions of the country, and 2) differences between the NLS and the 1960 Census with respect to age and sex.

This weight was not adjusted to take account of sample attrition after 1966. The sample is therefore representative of the civilian non-institutional male population only in 1966. All analyses reported here are weighted. I made the mean weight 1.000, which gave it an S.D. of 0.49.

Basic Sample

The analyses presented in this chapter are restricted to data for 1966. Since 1971 data were not available at the time analysis began, 1966 was the only year for which I had both income and occupational data. Virtually all the data comes from the 1966 survey, but 1966 income and weeks worked come from the 1967 survey. Approximately 7 percent of the NLS sample had zero or negative earnings in 1966. I excluded them. The sample does not include men in the military or in institutions.

Perhaps the most serious discrepancy between the NLS sample and the other samples described in this book is age. This age difference makes direct comparisons between the NLS and other data sets problematic. However, means, standard deviations, correlations, and certain regressions are available for a subset of OCG men aged 45 to 54. The average age within this subgroup is 49 compared to 51 in the NLS. The average birth date in the OCG subsample is 1912 compared to 1914 for the NLS. It should be noted that since the OCG subsample of 45-54 year olds was created by deleting all cases with any missing data on the basic variables, the most appropriate comparison may be to the NLS statistics for respondents with complete data.

VARIABLE DEFINITIONS

Table 1 presents questions and coding for those variables used in the basic analyses. Variable definitions follow the conventions detailed in Chapters 11 and 12 except as noted below.

Race. Interviewers guessed the respondent's race by observation.

Father's characteristics. Respondents were coded as having a male head present if they reported having a male head of household when they were age 15. The NLS education and occupation questions were asked in relation to the household head, whether or not he was the father. If no male was present, I assigned these individuals the sample mean.

The three digit classification of occupations from which I constructed Father White Collar was coded directly by Census personnel from the descriptions provided by respondents of their jobs. The Census made Duncan score assignment for Father's Occupation on the basis of the three-digit Census code, a three digit industry code and a code designating the class (governmental, self-employed, private, etc.) of worker. As a result, some individuals with a Census 3 digit occupational code were not assigned a Duncan score. 1/

Respondent's Occupation. Assignment of Duncan scores follows the same procedure outlined for Father's occupation.

Earnings. Earnings includes wages and salaries for the calendar year 1966 plus net income from farm, business, profession or partnership for the same year.

Family Income. This variable, like the Earnings measure, was ascertained in the 1967 interview and refers to the calendar year 1966. Family Income was constructed at CHRR and includes wages, salaries, income from several kinds of investments, and transfer income for all family members.

Weeks Worked. This question was asked in 1967 and refers to the twelve months preceding the survey. Surveys were conducted in July. The figure therefore represents a composite measure for the last half of 1966 and the first half of 1967.rather than all of 1966.

Father Native Born. Native born fathers include those born either in the United States or Canada. NLS [illegible] allowed no further breakdown of this category.

Vocational Training. Those reporting any one of a number of vocational training programs were coded as having had some additional training.

1/ Details of the classification scheme appear in Attachment 2 of the NLS Codebook.

UNIVARIATE DISTRIBUTIONS

Age differences make comparison of the univariate relationships in the NLS and those in either the Census or OCG difficult. Most of the distributions seem reasonable and many of the more serious deviations appear to be attributable to the age factor. A more detailed discussion of the frequency distributions presented in Table 1 appears under separate variable headings below. Where it seemed appropriate, I include comparisons of OCG 45-54 subsample means with the NLS means.

Race, No Male At Home, and Father White Collar. Distributions for Race and No Male At Home correspond quite closely to OCG distributions for these variables. The distribution of Father White Collar was similar in the NLS and PSID; definitional differences explain discrepancies on Father White Collar in the NLS and OCG.

Father's Education. Perhaps the most striking characteristic of the NLS distribution of Father's Education is the amount of missing data on this variable. Over 40% of those individuals in the basic sample fail to report the education of their father or other male household head. Of those who had a male-headed family at age 15, almost 30 percent failed to report Father's Education. Non-response in the OCG was 11 percent. Considering the difference in response rates, the similarity of the means for Father's Education in the basic and complete data samples is encouraging. Similarly, the mean for Father's Education in the OCG 45-54 subsample is comparable to the NLS mean.

When the frequency distributions for this variable in the OCG and NLS are compared, several differences appear. In general, NLS fathers are more likely to be poorly educated while OCG fathers are more likely to have some high school or be high school graduates. One exception is the greater percentage of NLS fathers who are reported to have graduated from college. This difference is quite likely an artifact of the high non-response rate. Respondents may be more likely to remember their father's level of education if he had completed a natural step in the education process such as college graduation. This supposition is supported by the fact that comparatively few individuals report that their fathers had completed some high school (as opposed to 4 years of high school). If this differential response rate hypothesis is valid, one might further suspect that the percentage of respondents **reporting** high school graduation is similarly inflated relative to other categories.

Father's Occupation. Although 18% of the basic sample were missing data on Father's Occupation, most of these men reported not having had a father present at age 15 and so were assigned the mean for this variable in constructing the listwise sample. Thus only 3% of the basic sample respondents were eliminated from the complete-data sample due to non-response on Father's Occupation.

The distributions of this variable in the OCG and the NLS seem fairly parallel with two exceptions. The first is that NLS fathers are slightly more likely to have had low status jobs (Duncan scores under 20) while OCG fathers are more likely to have Duncan scores above 70. This may be due to the difference in the age distribution of the two samples. The second and more puzzling discrepancy occures in the 60-69

Duncan score category which includes mostly proprietors of small businesses. NLS fathers were three times as likely to be coded in this category. On the basis of this comparison of NLS to full sample OCG results, one might posit an age difference hypothesis to explain distribution differences. However, if we turn to a comparison of means between the OCG 45-54 subsample and the NLS we find a difference of 3.5 points on the Duncan scale, with the NLS fathers having slightly higher Duncan scores. This is probably attributable to the same 60-69 bulge in the NLS distribution. Since NLS fathers are younger than OCG subsample fathers an age difference explanation for the large number of small businessmen among NLS fathers would be effectively ruled out.

Non-Farm Upbringing and Non-South Upbringing. The proportion of men reporting a southern upbringing is similar in the two surveys: 29.2 percent in the NLS and 28.4 percent in the OCG 45-54 subsample. The proportion of men reared on farms in the NLS is 35 percent as against 24 percent for the OCG 45-54 subsample. Since NLS men are younger, a time trend explanation clearly does not hold. Most likely coding differences between the two surveys--the OCG definition is less inclusive than the NLS--are responsible for the discrepancy.

Education. The distribution of respondent's education in the NLS approximates both the Census and OCG whole sample distributions. As expected due to age differences among the samples, NLS men are more likely to fall in the lower categories (0-11 years of schooling) while a greater percentage of Census respondents report having 12 years or more education. Means and S.D.'s for the OCG 45-54 subsample and the NLS are virtually identical.

Age. Because of the restrictions of the original sample with respect to age, this distribution differs markedly from both the Census and OCG. Within the range covered by the NLS, however, a fairly uniform distribution of respondents into age categories exists -- this distribution compares closely with the relevant portions of the OCG and Census distributions.

Experience. As expected, the NLS age restrictions produce a distribution in which the majority of respondents fall into the 31-40 years experience category.

Occupation. The occupational distribution in the NLS is remarkably similar to the OCG. NLS and OCG 45-54 subsample means and S.D.'s are quite similar as well.

Earnings. Mean earnings for all NLS respondents is $7770 while the mean for those with complete data is $8111. This second figure is approximately 20 percent larger than the mean reported for OCG men aged 45-54. Similarly, the mean for all respondents in the 1970 Census is 21 percent larger than the comparable NLS figure. These figures seem reasonable, in light of the interval between surveys. The most appropriate comparison however is to the 1966 CPS. The weighted average for both CPS subsamples (45-54 and 55-64 years old) is $7675 which corresponds closely to the NLS figure.

Weeks Worked. Mean Ln Earnings is similar in the Census. The comparisons between weeks worked in the NLS and PSID or Census are clearly not ideal in that the NLS data refers to 1966 while the PSID figures are for 1971 and Census for 1969. 89 percent of the men in the NLS reported working 46-52 weeks compared to 85 percent in the PSID. 75 percent of the Census sample worked 48-52 weeks. The NLS men are also less likely than PSID men to report working from 31 to 45 weeks. These two distributions are quite similar in the lower ranges.

Father Native Born. More fathers in the NLS than in the PSID are foreign born, which is reasonable in light of the difference in age distributions between the samples.

Vocational Training. Almost half of the respondents in the NLS are coded as having received some post-regular school vocational training. This is almost twice the percentage who report vocational training in the PSID and 1.5 times that of the Census. The most obvious explanation points to a coding difference between the surveys. The NLS measure is a very inclusive one: an individual can qualify by having either vocational or technical school training, Armed Forces vocational training, or company training which lasts longer than six weeks. The PSID variable includes only formal vocational or technical training obtained while enrolled in a technical school and the Census refers to completed programs.

Basic Versus Complete-Data Samples

I excluded 45 percent of the basic sample respondents as a result of incomplete data on one or more basic variables. Table 2, which presents basic and complete data sample means and S.D.'s, and Table 2A which presents comparison correlations for the NLS basic and complete data samples and the OCG 45-54 subsample, show that this has a surprisingly small effect on both the means and standard deviations of the major variables and the relationships among those variables.

In most cases the complete data sample was advantaged in comparison with the partial data group.

ut men with complete data are

more likely to have had an absent father, to report a poorly educated father, and to have been born in the South. The first two relationships can probably be explained by the allocation procedure for replacing missing data on Father's Education among men who reported an absent father but not among other men. A glance at the standard deviations for this variable supports this contention. Those with complete data contain a large proportion of respondents who were allocated the mean. This decreased their standard deviation. This allocation procedure may also account for differences between the two groups on Father's Education.

BIVARIATE RELATIONSHIPS

This section examines the bivariate relationships of Father's Education, Father's Occupation, Race, Age, Education, and Experience to educational, occupational and economic success. These bivariate relationships are presented in two forms: tables giving means and S.D.'s of the "success" measures for men with various background characteristics, and bivariate regressions of these indicators of success on background variables. The tables of means and standard deviations were computed on all respondents with data on the relevant variables. The bi variate regressions were constructed using the complete data sample.

Father's Education. Table 3B indicates that each additional year of Father's Education is associated with an additional 0.4 years of Education. The R^2 for the regression of Education on Father's

Education, 0.168, is greater than the eta^2 in Table 3A. This is partly a result of the large number of non-respondents on Father's Education. It also implies Education is a linear function of Father's Education. The second equation in Table 3B which adds Father's Education^2 and No Male At Home demonstrates this in another way. The coefficient for the squared term is negligible, indicating that the addition of this term does not improve the equation's predictive power. The large coefficient for Father Not Present and the corresponding increase in R^2 probably occurs as a result of the large number of non-respondents and therefore mean assignments on the Father's Education variable. A comparison of the overall mean for education (10.179) with the mean for those with missing data on Father's Education (9.310) seems to support the notion that assignment of the mean value to these non-respondents may have been incorrect.

The relationship between Father's and Respondent's Education is fairly homoscedastic. It is interesting that the few minor exceptions to this general pattern occur at natural completion points in the educational process--namely eight years of school, high school graduation, college graduation and graduate school. Standard deviations for each of these categories are smaller than those for less well-defined categories (such as some grade school, some high school or some college). This may indicate that there is a less variable effect of Father's Education at these completion points or may simply reflect differences in category range at different points on the education scale.

The relationship of Father's Education and Respondent's Occupation is also linear as a comparison of the eta^2 in Table 3A (0.102) and the R^2 for the linear equation in Table 3B (0.102) indicates. The addition of Father's $Education^2$ and No Male At Home increase the R^2 by 0.013. The relationship between the two variables is generally homoscedastic.

Because of the huge non-response on Father's Education, eta^2 in the NLS is not comparable to eta^2 in the full sample OCG. The linear regression of Education yield similar unstandardized coefficients in the two samples but R^2 is lower in NLS due to the larger number of individuals assigned the mean. Once I allow for non-linearity and for absent fathers, Father's Education explains almost exactly the same amount of variance in Education in the NLS as it does in the OCG. The OCG and NLS results for Occupation are similar, despite the large non-response rate in NLS.

The relationship between father's educational level and Ln Earnings is very similar to that found in the OCG. In both surveys this transformation fits a linear and homoscedastic model of the effects of father's education. These similarities are particularly striking since the NLS uses an earnings measure while OCG uses an income figure.

Finally, the NLS data allow an examination of the relationship between Father's Education and Family Income of the Respondent.

Between category differences in Father's Education accounts for 7.9 percent of the variance in Family Income in the NLS and 4.1 percent in the PSID. Similarly, both the linear and quadratic forms of the regression equations produce significantly higher R^2 in the NLS (0.080 and

0.099 as compared to 0.027 and 0.028). It seems likely that coding difficulties with the PSID Father's Education variable which were discussed in Appendix D account for the differences.

To summarize, the impact of Father's Education on Education, Occupation, and financial characteristics of the respondent, as estimated by the NLS data, parallels those relationships found in the OCG. The effect of Father's Education is less pronounced on those variables which refer to more recent outcomes, presumably because the influence of family background is diluted over time.

Father's Occupation. Tables 4A and 4B present means and standard deviations for categories of Father's Occupation and regressions of Respondent's Education, Occupation, and financial characteristics on Father's Occupation. Father's Occupation has less

effect on both Education and Occupation in the NLS sample than in OCG. A 10 point increase in Father's Occupation increases Education by 0.75 years in the OCG vs. 0.67 years in the NLS. Similarly, a 10 point increase in Father's Occupation increases respondent's Occupation by 4.87 in the OCG vs. 4.54 in the NLS. R^2 is also lower in the NLS than in OCG, and the S.D. of the residuals higher.

The relationship between Father's Occupation and Ln Earnings is similar in the two datasets. The only major difference, in fact, is the failure of squared terms to account for a statistically significant proportion of the variance in the NLS. Of course, comparisons between the NLS and OCG are problematic both because OCG measured Income, not Earnings, and then grouped the responses.

Respondent White. Table 6 shows differences between blacks and whites. Blacks have 3 years less education and Duncan scores approximately 20 points lower than whites. Annual earnings for Blacks average 57 percent of White Earnings.

Age. Tables 7A and 7B show that Age explains less variance in the NLS than in the OCG. This can undoubtedly be accounted for by the restricted range of Age in the NLS. In both surveys, a birth date one year later is associated with a small (0.08 in OCG, 0.09 in NLS) increase in years of Education. Older men also show lower Occupational status and less income. This is consistent with OCG, where status and income peak at 45. These declines are all essentially linear. Age^2 has a significant coefficient only for Earnings and Family Income and in all cases has a positive sign.

Education. Tables 9A, 9B, and 10 show the relationship between education and various measures of later economic success. I estimated four different forms of the Education equation: a simple linear form, a quadratic form (adding $Education^2$), a form with several spline and dummy variables representing various levels of education (all shown in Table 9B), and finally, a standard form of this last equation (equation 1 in Table 10). Variables entered in this final equation were selected on the basis of Census results and will be used in the multivariate analyses for purposes of comparability with other samples.

Education accounts for approximately 40 percent of the variance in Respondent's Occupation and around 20 percent of the variance in the various forms of Earnings. Although the figure for Occupation corresponds quite closely to that found in the OCG, R^2 for the earnings measures is considerably higher in the NLS than in either the OCG or Census.

In all regressions except that for Ln Earnings the addition of the Education Squared term produces a small but statistically significant increase in R^2.

Equation 5 shows the effect of adding various spline and dummy variables. Education, Years of College, and Vocational Training enter all equations (except that for Ln Earnings) at significant levels. The standard model of the effects of Education and Occupation and Earnings/Income explains slightly less variance than the "full" model with all significant education terms. R^2 falls by 0.038 for Occupation and by 0.002-0.007 for the Earnings/Income measures.

The relatively large discrepancy in Occupation R^2 may be due to the fact that Vocational Training has such a large effect in the NLS.

Experience. The addition of linear and quadratic forms of experience adds little to these equations (2 and 3 in Table 10). The almost uniformly negative impact of both measures of Experience reflects the age of the NLS men and is consistent with Census and OCG results for 45-54 year olds.

Summary of Bivariate Relationships.

Most of the bivariate relationships in the NLS correspond rather closely to the findings of the OCG and Census analyses. In those cases in which the percent variance explained differs markedly from these two surveys, differences can usually be attributed either to the age restriction in the NLS or to coding differences in the three surveys. As in the OCG, Father's Occupation accounted for more of the variance in dependent variables than did Father's Education, while both these variables explained substantially more variance than did either the effects of Race or Age. In all cases, either simple linear or quadratic forms provided adequate fits.

The standard equation which employed Education, Years Higher Education and BA as predictors of the various dependent variables adequately represents the relationships among these variables, although it was not the best possible model. This model for the NLS data had a significant term for Vocational Training, while the effect of BA was minimal.

MULTAVARIATE RELATIONSHIPS

The multivariate analyses which follow attempt to assess the effects of background characteristics on education and the direct and indirect effects of both background and education on various measures of economic success.

Education. In general, background variables explain approximately the same percentage of variance in the NLS and the OCG.

The effect of race on education is strikingly similar in the two surveys: Approximately half the total difference in Years of Education between blacks and whites is due to differences in measured family background.

Other variables in the education equations behave in much the same way as does the race variable. A comparison of the bivariate and multivariate tables supports the OCG conclusion that although background variables seem to have individual impacts on education, there is a considerable degree of correlation among them.

The only interaction which was also tested in the OCG, Father's Occupation x Age, entered with the same sign. The addition to R^2 as a result of adding interactions was minimal in both samples, although interactions did figure a bit more prominently in the NLS (0.012 increase in R^2 as opposed to 0.002 in the OCG).

The effect of having a white collar father also differs in the two surveys. While this variable accounts for an extra 0.74 years of education in the full sample and 0.94 years in the 45-54 OCG subsample, the effect of White Collar Father in the NLS is insignificant (less than 1.96 times its standard error) and negative in sign.

As in the OCG, the regressions of education on background characteristics show no major differences for blacks and whites. Father's characteristics seem to have a slightly greater effect on the educational attainment of whites, while other background variables (such as Non-farm Upbringing, No

Male At Home, Non-southern Upbringing, and Age) have stronger effects within the Non-white subsample.

The next step in the multivariate analyses was to examine the effects of background variables and education on our five standard measures of economic success: Occupation, Ln Earnings, Earnings, Earnings$^{1/3}$, and Family Income. In each case, I will focus on three issues: 1) the direct effects of background variables, 2) the mediating role of education and 3) the contribution made by the various interaction terms entered in the equations.

Occupation. The pattern of changes in coefficients as one moves from the bivariate to the multivariate level in the NLS parallels that found in the OCG. The percent of variance explained corresponds quite closely to the OCG. Squared and interaction terms add little to R^2.

The most surprising difference between the NLS and OCG is in the effect of Father's Occupation and Father's Education on Occupation. In the OCG, Father's Occupation has a stronger impact on Occupation than does Father's Education. Although this parallels the bivariate findings in the NLS, where Father's Education accounted for 10 percent of the variance in Occupation while Father's Occupation accounted for 13 percent, it is in contrast with the pattern of effects for these two variables in the NLS multivariate equations. In the first three equations in Table 14A, Father's Education emerges as the second strongest background variable (Non-farm Upbringing has the greatest impact on occupation). When Education and its splines are added to the equation (Equation 6) both Father's Education and Father's Occupation are reduced to insignificant levels: Father's

Education drops by 87 percent, while Father's Occupation is decreased by 73 percent. The percentage decrease in the standardized coefficient for Father's Education in Equation 6 is quite similar to that found in the OCG. The difference comes when we examine the reduction in the standardized coefficient for Father's Occupation which decreases by only 46 percent in the OCG when Education and its splines are added to the equation.

This pattern of results seems to suggest that although the direct and indirect (through Education) effects of Father's Education do not differ strikingly between the two samples, there is a difference in the [illegible] of Father's Occupation. In the NLS, more of the impact of Father's Occupation seems to operate by insuring that the son's educational opportunities will be enhanced rather than by directly affecting the son's eventual occupational status. As we look more closely at the determinants of various income measures, this pattern will emerge ever more strongly than in the case of occupational status.

The addition of the education variables in Table 14A not only affects the coefficients for Father's Education and Occupation. The coefficients of White Collar Father, No Male At Home, Non-southern Upbringing, Father Native Born, and Father's Education^2 become statistically insignificant while the coefficients of White and Non-farm are reduced substantially. Again, the role of Education as a mediating variable is supported. The same pattern occurs in the OCG. At the same time the doubling of R^2 indicates that Education has a powerful independent effect. Unlike the OCG, the addition of Experience to the regressions for Occupation does not change the coefficient for Education. This is not surprising as additional Experience has little effect on any outcome for men 45-59.

The only interaction involving race to enter significantly in the equations presented in Table 14A was Education x White. An examination of the split sample regressions in Table 14B shows that the coefficient for Education is larger for whites than for non-whites. This difference is much greater than in the OCG and probably reflects the difference in age distribution in the two surveys.

Table 14D presents regressions including both background and educational variables for white-collar, blue-collar, and farm sons. Again, the returns to education differ more by class background in the NLS than in the OCG. An extra year of elementary or secondary education increases Duncan scores by 3.3 points for NLS sons of white collar fathers, while NLS blue collar and farm sons can expect increases 2.2 and 1.0 points respectively. The values for white-collar and blue-collar sons do not differ significantly from one another or from the OCG values. The value for farm sons is, however, significantly lower than the value for white-collar or blue-collar sons, and also significantly lower than the OCG value for farm sons. This suggests that occupational returns to education were lower for older farm sons.

In summary, the effects of background variables on Occupation seem to be indirect. Education acts both as a mediator of these background variables and as an independent influence on occupational status. Experience and the orthogonal squared and interaction terms seem to have relatively minor effects.

Transformed Earnings: Ln Earnings and Earnings$^{1/3}$. Equations using Ln Earnings and Earnings $^{1/3}$ appear in Tables 16A and 17A

R^2 is slightly higher in the NLS than in the OCG; for Earnings $^{1/3}$, R^2 is similar predicting Ln Earnings in the two surveys. The mediating effect of education and its splines is clear. The coefficients of the background variables are reduced more by the addition of Education in the NLS than in the OCG. In the OCG the coefficient for White is reduced by about 15 percent, and in the NLS the coefficient decreased by 32 percent when I added the education variables. The same pattern of results involving the effect of Education on the coefficients for Father's Education and Occupation appears here. As in the Occupation model, the addition of Education and its splines decreased the independent effect of Father's Occupation more in the NLS and reduced the effect of Father's Education by a greater percentage in the OCG. The addition of Experience to the model caused few changes in the coefficients of other variables in NLS.

An examination of the split sample regressions in Tables 16 B and 16D reveals that more of the variance in Ln Earnings is explained for Whites than Non-Whites and for sons of white collar fathers as compared to sons of either blue collar or farm fathers.

Earnings. The general conclusions concerning the size of the effects of background variables on earnings and their indirect influence through Education in the OCG also apply to the NLS data. The major difference is that several background variables, most notably White, Father's Education, Nonfarm Upbringing, and Father Native Born, retain a good proportion of their independent effects even after the addition of Education to the NLS equation. As in the occupational equations, Father's Education is the single strongest background influence on earnings.

The addition of the education variables decreases the standardized coefficient of Father's Education by only 55 percent, while the coefficient for Father's Occupation decreases by 69 percent. The coefficient of Father's Occupation is reduced much more by the addition of the education variables in the NLS than in the OCG, while the coefficient of Father's Education decreases much more dramatically in the OCG. Again, it seems that while a father's occupational standing may function only to get more education for his son, a father's educational level has an effect on earnings above and beyond simply increasing his chances for educational attainment in the NLS.

Interaction terms added to Equation 8 add little to R^2. Table 15B, however, gives us a slightly different picture of the importance of interactions of background variables, education variables and race. Although R^2 for split sample analyses were approximately equal for whites and nonwhites in both the education and occupation regressions, this is clearly not the case here. R^2 for whites is more than twice the R^2 calculated within the non-white sample.

This difficulty can be resolved by comparing the standard deviations of the residuals within both racial subsamples. The lower figure for the non-white sample indicates that although less variance is explained in that sample, the total variance is smaller so that predictions are actually more accurate.

Family Income. The explanatory power of the models of family income in the NLS is similar to earning models, as are the individual effects of background and educational variables.

This, of course, is primarily due to the fact that the head of household's earnings comprise such a large part of the family income measure. A further example of the similarities between these two measures of financial success can be found in Table 18B which presents the split-sample regressions by race of respondent.

Here we see that although the percent of variance explained is quite similar within both groups, the standard deviation of the residuals is lower for nonwhites than for whites.

Summary of multivariate relationships

The mediating role of Education in the NLS models is even more pervasive than in the OCG. The addition of Education and its splines to an equation consistently lowers the coefficients of other variables, including race. In general, once years of Higher Education entered the equation, B.A. had little additional effect on any of the measure of economic success, although there were exceptions to this within certain Father's Occupation subsamples. The addition of Education reduced the independent effects of background variables on transformed earnings measures to a greater degree in the NLS than the OCG. However, the effect of background variables on untransformed earnings and occupation decreased more in the OCG than NLS when Education was added to the equation.

Table O: Cases Omitted by Basic Sample Restrictions: 1966 N. L. S.

Restriction (Exclusion Criterion)	Sample Size (Restrictions Applied Cumulatively)	Cases Omitted
None	5518	
Not Interviewed	5020	498
Students	5020	0
Institutional Population	5020	0
Military Personnel	5019	1
Zero or Negative Earners	4689	330
Basic Sample Size	4689	

Table 1: Coding of Principal Questions in N. L. S., with Frequency of Response for Civilian Males Aged 45-59 in 1966, with Earnings and not in School: N. L. S. Basic Sample (N=4689).

Variable Name	Question and Coding	Frequency	
White	By observation		
	White	1	90.88%
	Black	0	8.45
	Other	0	.67
			100.00%
	NA (N = 0)		
No Male at Home	With whom were you living when you were 15 years old?		
	Mother and Father	0	75.76%
	Father and Stepmother	0	1.72
	Mother and Stepfather	0	2.10
	Father Only	0	3.15
	Mother Only	1	8.71
	Male Relative	0	2.84
	Other Arrangement	1	4.63
	On Your Own	1	1.09
	NA (N = 20)	NA	100.00%
Father's Education	What was the highest grade of school completed by the head of the household where you lived at age 15?		
	Coded in exact years completed	0-4	22.37%
		5-7	21.30
		8	28.70
		9-11	5.79
		12	11.47
		13-15	4.73
		16	4.08
		17 +	1.56
			100.00%
	NA (N = 2059)		

Table 1 (continued)

Variable Name	Question and Coding	Frequency	
Father's Occupation	What kind of work was the head of the household where you lived at age 15 doing when you were 15 years old?		
	Coded to Census 3 Digit Categories, Recorded to Duncan Scores	0-9	8.78%
		10-19	55.37
		20-29	4.53
		30-39	4.01
		40-49	6.60
		50-59	2.93
		60-69	14.44
		70-79	1.11
		80-89	1.19
		90-96	1.04
			100.00%
	NA (N = 822)		
Father White Collar	As above		
	Coded to Census 3 Digit Categories		
	Prof, Technical, Kindred	1	10.64%
	Farmers and Farm Managers	0	16.72
	Mgrs, Officials, Proprietors	1	5.11
	Clerical and Kindred	1	4.93
	Sales Workers	1	24.09
	Craftsmen, Foremen & Kindred	0	17.95
	Operatives and Kindred	0	.01
	Private Household Workers	0	5.79
	Service Workers	0	6.94
	Farm Laborers and Foremen	0	1.97
	Other Laborers	0	5.85
	Armed Forces	0	0.00
			100.00%
	NA (N = 700)		
Non-Farm Upbringing	When you were 15 years old where were you living?		
	City (100,000 or more)	1	20.29%
	City (25,000 - 100,000)	1	11.00
	Suburb of Large City	1	2.39
	Town (under 25,000)	1	27.27
	Rural Non Farm	1	3.57
	Rural Farm	0	35.48
			100.00%
	NA (N = 20)		

Table 1 (continued)

Variable Name	Question and Coding	Frequency	
Non-South Upbrining	Where were you born?		
	Northeast	1	24.68%
	North Central	1	29.41
	South	0	32.94
	West	1	5.93
	Outside U.S.	1	7.04
			100.00%
	NA (N = 540)		
Years of Education	What is the highest grade (or year) of regular school you have completed?		
	Coded in exact years completed (up to 18)	0-4	6.00%
		5-7	13.04
		8	18.40
		9-11	19.92
		12	24.38
		13-15	8.47
		16	4.98
		17 +	4.80
			100.00%
	NA (N = 22)		
Respondent's Age	How old are you?		
	Coded in years	45-46	15.96%
		47-48	14.41
		49-50	14.58
		51-52	13.98
		53-54	12.79
		55-56	12.23
		57-59	16.05
			100.00%
	NA (N = 0)		
Work Experience	Age - (Education + 7) If Education Greater than 7 Age-14 if Education less than 7		
	Coded in years	20-30	28.68%
		31-40	57.36
		41-50	13.96
			100.00%
	NA (N = 0)		

Table 1 (continued)

Variable Name	Question and Coding	Frequency	
Total Family Income (1966)	Sum of Wages and Salaries, Net Income from Business or Profession, Net Farm Income Unemployment Compensation, Rental Income, Interests or Dividends or Income from Estates or Trusts. Disability Benefits, Social Security Benefits, Public Assistance or Welfare Payments, Food Stamps, Government Pensions and all other Services for Husband, Wife and Other Members of Household (asked in 1967 survey)	1-999	.93%
		1000-1999	2.91
		2000-2999	3.06
		3000-3999	4.58
		4000-4999	4.91
		5000-5999	6.50
		6000-6999	8.88
		7000-7999	8.91
		8000-8999	8.41
		9000-9999	8.72
		10000-14999	27.53
		15000-19999	8.75
		20000-24999	2.81
		25000-100000	3.09
			100.00%
	NA (N = 924)		
Weeks Worked	During the past 12 months, have you lost any full weeks of work because of lay off? During the past 12 months, have there been any full weeks that you were not working for any other reason (do not count paid vacation or paid sick leave)? Weeks worked = 52 minus sum of these two figures		
	Actual Number of weeks	0	1.05%
		1-10	.55
		11-20	1.29
		21-30	2.01
		31-40	3.45
		41-45	2.76
		46-52	88.91
			100.00%
	NA (N = 305)		

Table 1 (continued)

Variable Name	Question and Coding	Frequency	
Father Native Born	Was your father born in the U.S. or some other country? Specify country.		
	U.S. or Canada	1	74.02%
	North or West Europe	0	9.67
	Central or East Europe	0	8.07
	South Europe	0	6.13
	Latin America	0	.79
	Other	0	1.32
			100.00%
	NA (N = 47)		
Vocational Training	Aside from regular school, did you ever take a program in business college or technical institute such as draftsman or electronics training, etc?		
	... a full time program lasting 6 weeks or more at a company training school?		
	... any other vocational, technical, or apprenticeship training (not on the job training)?		
	... a vocational training program in the armed forces.		
	Yes on any one = yes on Vocational Training		
	YES	1	54.02%
	NO	0	45.98
			100.00%
	NA (N = 24)		
Tenure on Current Job	When did you start working at this job or business?		
	Tenure = 1966 - Year stated Coded in years	0	11.21%
		1-10	31.49
		11-20	28.87
		21-30	19.61
		31-40	7.88
		41-45	.78
		46-54	.16
			100.00%
	NA (N = 85)		

Table 1 (continued)

Variable Name	Question and Coding	Frequency	
Respondent's Occupation	What kind of work do you do (at current or last job)?		
	Coded to Census 3 Digit Categories, Recoded to Duncan Scores	0-9	9.89%
		10-19	26.90
		20-29	12.82
		30-39	9.87
		40-49	10.36
		50-59	7.32
		60-69	9.31
		70-79	7.19
		80-89	5.03
		90-96	1.31
			100.00%
	NA (N = 11)		
Annual Earnings	In 1966 - How much did you receive from wages, salary, commissions, or tips from all jobs before deductions for taxes or anything else? (Asked in 1967 survey) In 1966, how much did your family receive from operating a farm? (Asked in 1967 survey) Earnings = sum of these three figures		
	Coded in dollars, up to $99,999	1-999	2.85%
		1000-1999	4.34
		2000-2999	4.75
		3000-3999	6.62
		4000-4999	7.91
		5000-5999	10.94
		6000-6999	12.18
		7000-7999	10.98
		8000-8999	9.98
		9000-9999	7.12
		10000-14999	16.14
		15000-19999	3.50
		20000-24999	1.61
		25000-100000	1.99
			100.00
	NA (N = 518)	NA	

Table 1 (continued)

Variable Name	Question and Coding	Frequency	
Employment Status	What were you doing most of last week?		
	Working	1	92.19%
	With a job, not at work	1	4.79
	Unemployed	0	1.11
	Going to school	0	0.00
	Retired	0	.19
	Unable to work	0	.89
	Other	0	.82
	Never worked	0	0.00
			100.00%
	NA (N = 0)		

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Table 2 : Means and Standard Deviations of Basic Variables for Civilian Males Aged 45-59 in 1966, with Earnings and not in School: Comparisons of N.L.S. Sample With and Without Missing Data (Complete Data Sample N= 2830)

		MEANS			STANDARD DEVIATIONS		
	Number of Respondents	All Respondents	Respondents With Complete Data	Respondents With Partial Data	All Respondents	Respondents With Complete Data	Respondents With Partial Data
Respondent White	4687	.909	.911	.905	.288	.284	.294
Father's Education	2629	7.581	7.542	7.950	4.130	3.656	4.364
Father's Occupation	3866	28.384	29.775	26.666	22.733	20.803	21.838
Father White Collar	3866	.232	.254	.206	.422	.387	.404
No Male at Home	4665	.144	.201	.055	.351	.400	.229
Non-Farm Upbringing	4664	.645	.646	.644	.478	.478	.479
Non-South Upbringing	4670	.708	.701	.718	.455	.458	.450
Years of Education	4665	10.179	10.448	9.754	3.612	3.681	3.457
Age	4687	51.434	51.221	51.767	4.273	4.212	4.347
Work Experience	4687	33.920	33.437	34.674	5.505	5.490	5.442
Occupation	4676	36.679	37.982	34.632	24.326	24.794	23.425
Annual Earnings	4169	7770.484	8111.340	7028.020	5659.746	5858.129	5125.863
Earnings 1/3	4169	18.830	19.180	18.226	4.407	4.451	4.248
Ln Earnings	4169	8.699	8.747	8.595	.911	.883	.961
Family Income	3762	10098.723	10391.813	9170.320	6431.508	6710.488	5759.996
Ln Weekly Earnings	4107	4.840	4.859	4.753	.839	.850	.859
Weeks Worked	4381	49.165	49.784	48.883	8.551	6.825	8.908
Father Native Born	4638	.740	.776	.683	.438	.417	.465
Vocational Training	4661	.460	.485	.420	.498	.500	.494
Tenure on Current Job	4600	14.298	14.309	14.281	11.059	10.874	11.340
Employment Status	4687	.970	.974	.963	.171	.159	.188

Table 2A: CORRELATIONS AMONG BASIC VARIABLES FOR MALES AGED 45-59 IN 1966 WITH EARNINGS AND NOT IN SCHOOL: COMPARISONS OF N.L.S. RESPONDENTS WITH DATA ON EACH PAIR OF VARIABLES AND WITH COMPLETE DATA ON ALL VARIABLES , and OCG men aged 45-54 (complete data sample, N=2707)

		1	2	3	4	5	6	7	8	9	10	11
1. White	C	1.000										
	P	1.000										
	OCG	1.000										
2. Father's Education	C	.107	1.000									
	P	.145	1.000									
	OCG	.124	1.000									
3. Father's Occupation	C	.090	.442	1.000								
	P	.136	.445	1.000								
	OCG	.096	.427	1.000								
4. Father White Collar	C	.066	.404	.893	1.000							
	P	.107	.401	.887	1.000							
	OCG	.075	.354	.770	1.000							
5. No Male At Home	C	-.179	.009	.019	.017	1.000						
	P	-.122	.0	.0	.0	1.000						
	OCG	-.188	.038	-.037	-.022	1.000						
6. Non-Farm Upbringing	C	.090	.174	.428	.366	.094	1.000					
	P	.095	.188	.426	.363	.080	1.000					
	OCG	.029	.125	.282	.252	.021	1.000					
7. Non South Upbringing	C	.306	.101	.120	.086	-.058	.242	1.000				
	P	.315	.109	.125	.087	-.035	.257	1.000				
	OCG	.348	.121	.124	.104	-.102	.203	1.000				
8. Years of Education	C	.235	.410	.378	.330	-.180	.304	.214	1.000			
	P	.250	.469	.435	.379	-.116	.306	.213	1.000			
	OCG	.222	.387	.418	.380	-.113	.211	.225	1.000			
9. Age	C	.007	-.047	.051	.048	-.004	-.024	.011	-.107	1.000		
	P	.012	-.051	.048	.045	-.023	-.031	.015	-.106	1.000		
	OCG	.004	-.008	-.008	.002	.003	.015	.005	-.095	1.000		
10. Work Experience	C	-.094	-.270	-.190	-.164	.092	-.183	-.083	-.625	.825	1.000	
	P	-.090	-.299	-.213	-.185	.039	-.183	-.077	-.611	.835	1.000	
	OCG	-.116	-.275	-.316	-.286	.065	-.133	-.125	-.738	.714	1.000	
11. Occupation	C	.216	.320	.381	.346	-.081	.323	.149	.605	-.042	-.388	1.000
	P	.214	.357	.404	.360	-.042	.300	.123	.602	-.043	-.375	1.000
	OCG	.238	.255	.391	.340	-.073	.200	.147	.587	-.027	-.437	1.000

Table 2A: page two

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
12. Annual Earnings *	C	.173	.286	.316	.287	-.097	.256	.150	.476	-.050	-.315	.541	1.000			
	P	.172	.299	.318	.287	-.063	.239	.142	.463	-.054	-.300	.535	1.000			
	OCG	.193	.221	.354	.300	-.080	.170	.178	.428	-.056	-.341	.499	1.000			
13. Earnings$^{1/3}$*	C	.217	.286	.303	.273	-.089	.308	.181	.515	-.097	-.361	.561	.910	1.000		
	P	.214	.308	.312	.275	-.056	.297	.178	.503	-.092	-.338	.550	.904	1.000		
	OCG	.253	.228	.320	.267	-.097	.191	.227	.454	-.065	-.348	.502	.908	1.000		
14. Ln Earnings*	C	.196	.230	.244	.221	-.060	.285	.153	.438	-.105	-.320	.462	.726	.921	1.000	
	P	.187	.245	.246	.215	-.036	.277	.153	.425	-.097	-.294	.437	.706	.915	1.000	
	OCG	.258	.204	.265	.219	-.094	.182	.226	.416	-.060	-.310	.439	.781	.967	1.000	
15. Family Income	C	.178	.282	.294	.271	-.104	.240	.144	.478	-.055	-.318	.528	.881	.817	.658	1.000
	P	.184	.294	.298	.271	-.064	.233	.154	.466	-.058	-.303	.523	.874	.801	.622	1.000
16. Ln Weekly Earnings	C	.188	.219	.235	.212	-.059	.282	.149	.417	-.095	-.304	.443	.704	.882	.960	.640
	P	.188	.228	.234	.206	-.030	.268	.154	.396	-.092	-.280	.423	.692	.873	.956	.617
17. Weeks Worked	C	.057	.081	.078	.076	-.016	.057	.034	.154	-.061	-.120	.158	.198	.283	.287	.173
	P	.045	.093	.084	.077	-.024	.069	.032	.165	-.049	-.112	.154	.215	.341	.360	.173
18. Father Native	C	-.116	.158	-.015	.0	-.038	-.202	-.298	-.004	-.042	-.036	-.011	-.086	-.092	-.078	-.083
	P	-.141	.181	-.022	-.014	.002	-.227	-.316	-.031	-.038	-.021	-.009	-.074	-.092	-.083	-.097
19. Vocational Training	C	.120	.141	.123	.106	-.018	.151	.075	.236	-.153	-.234	.252	.131	.183	.177	.162
	P	.114	.159	.148	.120	.006	.169	.088	.248	-.121	-.214	.241	.139	.192	.182	.172
20.. Tenure on Current Job	C	.048	.004	.045	.041	-.044	.042	.061	.048	.194	.125	.087	.170	.181	.143	.112
	P	.051	.005	.049	.046	-.041	.044	.061	.060	.183	.114	.098	.172	.186	.143	.120
21. Employment Status	C	.022	.040	.024	.033	-.033	.011	.034	.053	-.060	-.071	.084	.125	.207	.218	.095
	P	.039	.048	.025	.030	-.050	-.005	.012	.056	-.050	-.067	.075	.129	.223	.254	.095
22. Weight (Complete Data Sample)	C	.619	.072	.097	.071	-.109	.079	.135	.225	.009	-.108	.229	.138	.178	.166	.145

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		16	17	18	19	20	21	22
15. Family Income	C							
	P							
16. Ln Weekly Earnings	C	1.000						
	P	1.000						
17. Weeks Worked	C	.023	1.000					
	P	.015	1.000					
18. Father Native	C	-.082	.006	1.000				
	P	-.085	-.010	1.000				
19. Vocational Training	C	.175	.040	-.012	1.000			
	P	.169	.071	-.020	1.000			
20. Tenure on Current Job	C	.109	.149	-.032	-.089	1.000		
	P	.114	.108	-.024	-.073	1.000		
21. Employment Status	C	.150	.277	.026	.031	.077	1.000	
	P	.098	.429	.036	.028	.069	1.000	
22. Weight (Complete Data Sample	C	.167	.013	-.060	.114	-.007	-.064	1.000

Note: *These variables measure Income in the OCG.

Table 2F: Means and Standard Deviations of Basic Variables for Civilian Males Aged 45-54 in 1962 With Earnings and Not in School: OCG Complete Data Sample (N=2707)

Variable	Mean	Standard Deviation
Occupation	37.5081	23.8643
Income	6510.0625	5081.9922
Income$^{1/3}$	17.5878	4.4967
Ln Income	8.4861	.8850
White	.9310	.2535
Father's Education	7.2908	3.9910
Father's Occupation	26.3283	20.3967
White Collar Father	.1928	.3946
Nonsouth Upbringing	.7164	.4508
Nonfarm Upbringing	.7614	.4263
Siblings	4.6522	3.1396
Age	49.3353	2.8458
Education	10.5613	3.6280
Years of Higher Education	.7644	1.6544
BA	.1117	.3151
Experience	31.4433	4.3929

Table 3A: Characteristics by Level of Father's Education for Civilian Males Aged 45-59 in 1966 with Earnings and not in School: N.L.S. Basic Sample (n=4689)

Level of Father's Education	Number of Respondents	Years of Education Mean	Years of Education S.D.	Occupation Mean	Occupation S.D.	Annual Earnings Mean	Annual Earnings S.D.	$\text{Earnings}^{1/3}$ Mean	$\text{Earnings}^{1/3}$ S.D.	Ln Earnings Mean	Ln Earnings S.D.	Family Income Mean	Family Income S.D.
Total	4689	10.179	3.612	36.679	24.328	7770.566	5661.008	18.830	4.407	8.699	.911	10098.754	6432.852
0-4 YRS	588	8.678	3.679	29.678	21.651	6568.242	5037.355	17.700	4.419	8.493	1.014	8962.660	5788.137
5-7	560	10.161	3.189	34.714	24.135	7324.637	4808.035	18.639	3.893	8.696	.766	9578.973	5455.336
8	754	10.976	2.977	37.907	23.382	8180.473	5428.418	19.288	4.194	8.783	.874	10643.090	6168.285
9-11	152	11.975	3.069	45.249	25.714	8815.617	4324.809	20.031	3.723	8.910	.840	10986.461	5966.297
12	301	12.733	2.794	52.990	24.190	10721.527	6797.738	21.239	4.227	9.086	.829	13248.438	7485.262
13-15	125	13.153	3.401	54.570	25.334	11215.914	6358.273	21.620	4.114	9.164	.592	13453.727	7238.105
16	108	13.999	2.933	56.129	24.551	13122.141	11218.531	21.849	6.378	9.100	1.023	16651.262	11608.719
17 and more	42	16.022	1.865	71.245	20.430	15051.004	8546.070	23.901	4.348	9.473	.538	18721.980	9515.480
Not Reported	2060	9.310	3.456	32.928	22.449	6963.191	4928.438	18.186	4.199	8.595	.914	9140.328	5675.516
Eta^2		.163		.102		.079		.073		.044		.079	
Number of Respondents Reporting Dependent Variable		4666		4677		4170		4170		4170		3762	

Table 3B: Regressions of Education, Occupation, Earnings, and Family Income on Father's Education for Males Aged 45-59 in 1966 with Earnings and not in School: N.L.S. Complete Data Sample (N= 2830)

	Unstandardized Coefficients (and Standard Errors) of Independent Variables					
Dependent Variable	Father's Education	Father's Education^2	No Male At Home	Constant	R^2	Residual S. D.
Years of Education	.4126 (.017)			7.336	.168	3.358
	.4083 (.052)	[.0004] (.003)	-1.6860 (.163)	7.681	.202	3.290
Occupation	2.1688 (.121)			21.626	.102	23.503
	[.6849] (.368)	.0926 (.022)	-3.6109 (1.154)	27.035	.115	23.344
Annual Earnings	457.3369 (28.861)			4662.195	.082	5617.281
	[56.8105] (87.632)	25.0002 (5.152)	-1032.7969 (275.198)	6133.621	.099	5565.859
Earnings$^{1/3}$	.3478 (.022)			16.485	.082	4.267
	.2049 (.067)	.0090 (.004)	-.8635 (.210)	17.107	.092	4.245
Ln Earnings	.0554 (.004)			8.329	.053	.860
	.0459 (.014)	[.0006] (.001)	-.1264 (.042)	8.384	.057	.859
Family Income	517.9575 (33.094)			6485.461	.080	6441.164
	[41.0966] (100.366)	29.7687 (5.900)	-1290.6316 (315.190)	8249.293	.099	6374.684

Coefficients in brackets are less than 1.96 times their standard errors.

Table 4A: Characteristics by Level of Father's Occupation for Civilian Males Aged 45-59 in 1966 with Earnings and not in School: N.L.S. Basic Sample (n=4689)

Father's Occupation	Number of Respondents	Years of Education Mean	Years of Education S.D.	Occupation Mean	Occupation S.D.	Annual Earnings Mean	Annual Earnings S.D.	Earnings$^{1/3}$ Mean	Earnings$^{1/3}$ S.D.	Ln Earnings Mean	Ln Earnings S.D.	Family Income Mean	Family Income S.D.
Total	4689	10.179	3.612	36.680	24.328	7770.578	5661.004	18.830	4.407	8.699	.911	10098.758	6432.844
0-9	339	9.073	3.152	30.945	21.518	6786.418	3745.765	18.176	3.914	8.595	.944	9221.066	4562.668
10-19	2139	9.279	3.361	30.071	21.802	6622.012	4336.273	17.875	4.202	8.529	1.004	8878.516	5431.406
20-29	176	10.652	2.872	37.038	21.735	8747.961	6169.668	19.956	3.520	8.934	.541	11269.293	6680.828
30-39	155	11.404	2.969	44.775	22.766	9156.824	5611.426	20.255	3.660	8.976	.546	11800.820	5261.633
40-49	256	12.008	2.863	46.461	24.161	9542.055	7157.539	20.247	4.444	8.931	.875	12280.648	7741.262
50-59	113	12.114	3.000	51.809	22.535	9052.754	4540.438	20.175	3.792	8.952	.634	11775.883	6100.859
60-69	558	12.558	3.105	51.867	24.349	10825.570	8298.691	21.059	4.736	9.065	.695	13515.434	8748.375
70-79	43	14.063	3.248	57.134	25.111	11212.805	6378.973	21.178	5.476	9.005	1.086	13104.375	8217.313
80-89	47	14.456	2.843	65.526	22.129	15652.727	11852.078	23.788	5.353	9.438	.638	17440.789	11834.109
90-96	40	15.823	2.172	67.502	25.810	15256.191	8600.367	24.012	4.363	9.487	.537	17554.809	8901.723
Not Reported	822	9.450	3.694	34.913	22.883	7084.406	4233.863	18.414	3.964	8.653	.774	9344.867	5339.105
ETA^2		.165		.141		.101		.093		.060		.086	
Number of Respondents Reporting Dependent Variable		4666		4677		4170		4170		4170		3762	

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Table 4B: Regressions of Education, Occupation, Earnings, and Family Income on Father's Occupation for Males Aged 45-59 in 1966 with Earnings and not in School: N.L.S. Complete Data Sample (N= 2830)

Unstandardized Coefficients (and Standard Errors) of Independent Variables

Dependent Variable	Father's Occupation	Father's Occupation^2	No Male At Home	Constant	R^2	Residual S. D.
Years of Education	.0669 (.003)			8.455	.143	3.408
	.0895 (.015)	[-.0003] (.000)	-1.8743 (.185)	8.506	.179	3.337
Occupation	.4538 (.021)			24.469	.145	22.938
	.5262 (.102)	[-.0008] .001	-5.9200 (1.267)	24.616	.153	22.840
Annual Earnings	88.8943 (5.024)			5464.473	.100	5561.617
	82.0334 (24.663)	[.0891] (.290)	1454.1807 (306.886)	5843.020	.110	5530.730
$\text{Earnings}^{1/3}$	.0648 (.004)			17.179	.092	4.243
	.0858 (.019)	[-.0002] (.000)	-1.1897 (.234)	17.119	.101	4.223
Ln Earnings	.0103 (.001)			8.439	.059	.857
	.0163 (.004)	[-.0001] (.000)	-.1821 (.047)	8.392	.064	.855
Family Income	94.7586 (5.798)			7570.316	.086	6418.066
	103.3804 (28.440)	[-.0953] (.334)	-1897.1716 (353.877)	7819.984	.098	6377.609

Coefficients in brackets are less than 1.96 times their standard errors.

Table 6: Characteristics by Race for Civilian Males Aged 45-59 in 1966 with Earnings and not in School: N.L.S. Basic Sample (n=4689)

Respondent's Race	Number of Respondents	Years of Education		Occupation		Annual Earnings		Earnings $^{1/3}$		Ln Earnings		Family Income	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Total	4688	10.179	3.612	36.679	24.324	7770.531	5660.168	18.830	4.407	8.699	.911	10098.707	5431.973
White	4261	10.465	3.436	38.328	24.296	8081.793	5752.059	19.132	4.337	8.754	.883	10478.484	6505.184
Black	396	7.115	3.901	19.259	16.492	4610.078	3404.232	15.732	3.956	8.138	.996	6150.914	3855.953
Other	31	9.998	4.863	33.106	24.486	6280.492	3029.763	17.794	3.648	8.524	1.032	9809.445	5921.797
NA	0												
Eta^2		.067		.048		.030		.047		.036		.036	
Number of Respondents Reporting Dependent Variables		4666		4677		4170		4170		4170		3762	

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Table 7A: Characteristics by Age for Civilian Males Aged 45-59 in 1966 with Earnings and not in School: N.L.S. Basic Sample (n=4689)

Age of Respondents	Number of Respondents	Years of Education Mean	Years of Education S.D.	Occupation Mean	Occupation S.D.	Annual Earnings Mean	Annual Earnings S.D.	Earnings$^{1/3}$ Mean	Earnings$^{1/3}$ S.D.	Ln Earnings Mean	Ln Earnings S.D.	Family Income Mean	Family Income S.D.
Total	4689	10.179	3.612	36.679	24.328	7770.516	5660.980	18.830	4.407	8.699	.911	10098.699	6432.816
45-46 YRS	748	10.622	3.496	38.390	24.291	8284.352	5193.254	19.426	4.085	8.818	.755	10723.852	6139.703
47-48	676	10.707	3.612	38.688	25.053	8153.906	5468.852	19.284	4.113	8.800	.718	10633.727	6417.777
49-50	684	10.547	3.489	37.537	24.250	7969.789	5797.066	19.050	4.261	8.758	.737	10329.867	6448.910
51-52	656	9.919	3.561	34.058	23.375	7636.500	5561.863	18.706	4.436	8.664	1.028	9824.648	6441.000
53-54	600	9.875	3.524	36.502	23.635	7330.238	4598.746	18.571	4.142	8.659	.935	9482.250	5636.246
55-56	573	9.749	3.859	34.526	23.835	7172.344	5905.875	18.175	4.599	8.574	1.003	9303.531	5971.453
57-59	753	9.724	3.608	36.463	25.143	7629.324	6667.246	18.413	4.979	8.589	1.106	10068.918	7460.074
NA	0												
Eta^2		.013		.005		.004		.009		.010		.006	
Number of Respondents Reporting Dependent Variable		4666		4677		4170		4170		4170		3762	

Table 7B: Regressions of Education, Occupation, Earnings, and Family Income on Age for Males Aged 45-59 in 1966 with Earnings and not in School: N.L.S. Complete Data Sample (N=2580)

Dependent Variable	Age	Age^2	Constant	R^2	Residual S. D.
	Unstandardized Coefficients (and Standard Errors) of Independent Variables				
Years of Education	-.0931 (.016)		15.215	.011	3.661
	[-.5748] (.432)	[.0047] (.004)	27.571	.012	3.661
Occupation	-.2487 (.111)		50.719	.002	24.785
	[-4.0594] (2.922)	[.0369] (.028)	148.453	.002	24.782
Annual Earnings	-70.1225 (26.124)		11703.043	.003	5853.848
	-1463.5115 (689.786)	13.4910 (6.674)	47439.516	.004	5850.656
Earnings$^{1/3}$	-.1023 (.020)		24.348	.009	4.431
	-1.0491 (.522)	[.0092] (.005)	48.631	.011	4.430
Ln Earnings	-.0221 (.004)		9.879	.011	.879
	[-.1854] (.104)	[.0016] (.001)	14.068	.012	.879
Family Income	-87.2471 (29.919)		14860.629	.003	6704.195
	-1657.1074 (790.004)	15.1997 (7.643)	55123.125	.004	6700.699

Coefficients in brackets are less than 1.96 times their standard errors.

Table 9A: Characteristics by Education for Civilian Males Aged 45-59 in 1966 with Earnings and not in School: N.L.S. Basic Sample (n=4689)

Respondent's Education	Number of Respondents	Occupation Mean	Occupation S.D.	Annual Earnings Mean	Annual Earnings S.D.	Earnings$^{1/3}$ Mean	Earnings$^{1/3}$ S.D.	Ln Earnings Mean	Ln Earnings S.D.	Family Income Mean	Family Income S.D.
Total	4689	36.680	24.327	7770.590	5660.992	18.830	4.407	8.699	.911	10098.770	6432.8
0-4	281	16.691	13.399	3674.845	2777.568	14.373	4.139	7.809	1.242	5355.090	3703.3
5-7	608	21.868	15.323	5233.172	3239.380	16.494	4.030	8.255	1.188	7257.195	4265.5
8	859	25.315	16.317	6159.121	3755.546	17.569	3.812	8.502	.864	8147.004	4246.3
9-11	929	33.120	19.722	7228.363	4104.602	18.759	3.351	8.735	.670	9578.746	5257.6
12	1137	41.140	22.523	8294.449	4537.316	19.661	3.428	8.885	.574	10873.059	5288.8
13-15	396	52.912	22.154	10703.598	6783.848	21.241	4.178	9.092	.783	13439.074	7311.3
16	232	70.323	17.444	13959.617	8468.047	23.255	4.443	9.376	.663	17052.398	8484.5
17 and more	224	74.163	17.062	15164.039	10028.895	23.715	4.989	9.431	.643	18654.133	10836.2
N.A.	22	32.886	20.984	6570.711	3226.469	17.789	4.443	8.506	.961	8312.418	4347.8
Eta^2		.387		.233		.252		.180		.233	
Number of Respondents reporting dependent variable		4677		4170		4170		4170		3762	

Table 9B: Regressions of Occupation, Earnings and Family Income on Education for Males Aged 45-59 in 1966 with Earnings and not in School: N.L.S. Complete Data Sample (N=2580)

	Unstandardized Coefficients (and Standard Errors) of Independent Variables					
Dependent Variable	Years of Education	Years of Education^2	Years of Elementary School	Years of College	Years of Graduate School	High School Diploma
Occupation	4.0772 (.101)					
	[-.7659] (.396)	.2373 (.019)				
	3.3251 (.240)		-2.1372 (.431)	3.0914 (.757)	DNE*	DNE
Annual Earnings	757.8398 (26.321)					
	[-104.7175] (104.944)	42.2670 (4.982)				
	410.7759 (55.101)		DNE	1055.4907 (105.033)	DNE	[458.4553] (320.446)
Earnings$^{1/3}$	.6225 (.019)					
	.3937 (.079)	.0112 (.004)				
	.5045 (.029)		DNE	.4248 (.083)	[-.3271] (.216)	DNE
Ln Earnings	.1052 (.004)					
	.1104 (.016)	[-.0003] (.001)				
	.1031 (.005)		DNE	DNE	[-.0437] (.042)	DNE
Family Income	870.9487 (30.122)					
	[-49.8815] (120.299)	45.1225 (5.711)				
	649.0171 (74.065)		[-227.1272] (133.137)	931.4792 (150.567)	DNE	DNE

Table 9B: (continued)

Dependent Variable	College Degree	Vocational Training	Constant	R^2	Residual S. D.
Occupation			-4.617	.366	19.749
			16.863	.400	19.218
	[4.4610] (2.562)	7.4447 (.739)	13.143	.427	18.794
Annual Earnings			193.414	.227	5154.449
			4018.938	.246	5090.977
	DNE	536.0813 (198.882)	2667.566	.254	5066.203
$\text{Earnings}^{1/3}$			12.604	.265	3.817
			13.618	.267	3.812
	DNE	.6757 (.149)	13.267	.276	3.791
Ln Earnings			7.648	.192	.794
			7.625	.192	.794
	DNE	.1324 (.031)	7.609	.198	.792
Family Income			1292.105	.228	5898.910
			5376.078	.245	5835.891
	DNE	1028.2898 (227.641)	4216.566	.254	5803.430

* Not significant at .01 level (two-tailed) and therefore not entered in this regression

Coefficients in brackets are less than 1.96 times their standard errors.

Table 10: Regressions of Education, Occupation, Earnings and Family Income on Education and Work Experience for Males Aged 45-59 in 1966 with Earnings and not in School: N.L.S. Complete Data Sample (N= 2830)

Dependent Variable	Years of Education	Years of Higher Education	College Degree	Work Experience	Work Experience^2	Constant	R^2	Residual S. D.
Occupation	2.8990 (.143)	2.8044 (.619)	[5.3645] (2.769)			5.014	.397	19.272
	2.8852 (.160)	2.7995 (.619)	[5.3718] (2.770)	[-.0160] (.085)		5.696	.397	19.276
	2.8790 (.162)	2.8381 (.634)	[5.3630] (2.771)	[.2013] (.764)	[-.0032] (.011)	2.155	.397	19.279
Annual Earnings	518.5552 (37.665)	571.3853 (163.063)	[1078.7744] (729.996)			2149.298	.249	5080.383
	502.8235 (42.283)	565.7566 (163.217)	[1087.1294] (730.110)	[-18.2827] (22.325)		2928.134	.249	5080.676
	493.8530 (42.659)	621.3909 (167.008)	[1074.5232] (729.968)	[294.7107] (201.372)	[-4.6260] (2.958)	-2171.598	.250	5079.379
Earnings$^{1/3}$	.5570 (.028)	[.5279] (.547)	[.1166] (.122)			13.142	.268	3.810
	.5152 (.032)	[.1017] (.122)	[.5501] (.547)	-.0485 (.017)		15.208	.270	3.805
	.5086 (.032)	[.1425] (.125)	[.5408] (.547)	[.1812] (.151)	[-.0034] (.002)	11.466	.271	3.804
Ln Earnings	.1069 (.006)	[-.0175] (.026)	[.0708] (.114)			7.635	.192	.794
	.0964 (.007)	[-.0213] (.025)	[.0764] (.114)	-.0122 (.003)		8.153	.196	.793
	.0950 (.007)	[-.0123] (.026)	[.0744] (.114)	[.0382] (.031)	[-.0007] (.000)	7.333	.196	.793
Family Income	623.9023 (43.227)	597.9922 (187.146)	[1066.8096] (837.810)			3310.957	.246	5830.711
	600.0610 (48.523)	589.4619 (187.306)	[1079.4705] (837.867)	[-27.7074] (25.620)		4491.281	.247	5830.535
	594.1189 (48.970)	626.3140 (191.712)	[1071.1204] (837.946)	[179.6184] (231.159)	[-3.0642] (3.395)	1113.240	.247	5830.727

Coefficients in brackets are less than 1.96 times their standard errors.

TABLE 13 A: REGRESSION OF YEARS OF EDUCATION ON CHARACTERISTICS OF CIVILIAN MALES AGED 45-59 IN 1966 WITH EARNINGS AND NOT IN SCHOOL: N.L.S COMPLETE DATA SAMPLE (N = 2830)

Independent Variables	Zero-Order Correlations	B (1) (S.E.)	BETA	B (2) (S.E.)	BETA	B (3) (S.E.)	BETA	B (5) (S.E.)	BETA
		Standardized (Beta) and Unstandardized (B) Regression Coefficient (and Standard Error) for Selected Equations							
White	.235	1.5557 (.217)	.120	1.5264 (.218)	.118	1.5334 (.216)	.118	1.4959 (.216)	.115
Father's Education	.410	.2880 (.018)	.286	.2857 (.018)	.284	.2777 (.018)	.276	.2753 (.018)	.274
Father's Occupation	.378	.0319 (.006)	.180	.0331 (.006)	.187	.0348 (.006)	.197	.0404 (.006)	.228
White Collar Father	.330	[-.2183] (.330)	-.023	[-.2017] (.330)	-.021	[-.1870] (.328)	-.020	[-.2168] (.326)	-.023
No Male at Home	-.180	-1.6123 (.147)	-.175	-1.7122 (.157)	-.186	-1.7058 (.156)	-.186	-1.6985 (.155)	-.185
Non Farm Upbringing	.304	1.3465 (.139)	.175	1.3359 (.139)	.174	1.2837 (.138)	.167	1.1721 (.139)	.152
Non Southern Upbringing	.214	.6609 (.141)	.082	.6411 (.141)	.080	.6503 (.140)	.081	.6261 (.140)	.078
Father Native Born	-.004	[.1827] (.150)	.021	[.1434] (.152)	.016	[.1121] (.151)	.013	[.1085] (.151)	.012
Father's Education Squared**	.060	[-]		[-.0055] (.003)	-.032	[-.0052] (.003)	-.030	[-.0038] (.003)	-.022
Age	-.106	-		-		-.0867 (.014)	-.099	.0865 (.014)	-.099
No Male at Home X Non Farm Upbringing**	.016	+		+		+		1.6855 (.329)	.082
Father's Education X Non Farm Upbringing**	-.015	-		-		-		-.1138 (.037)	-.051
White X Father Native Born**	.079	+		+		+		2.2867 (.775)	.046
Father's Occupation X Age**	.052	+		+		+		.0018 (.001)	.043
No Male at Home X Father Native Born**	-.0006	[+]		[+]		[+]		.7090 (.337)	.033
Constant		4.812		4.605		9.110		13.685	
R^2		.309		.309		.319		.331	
S.D. of Residual		3.065		3.064		3.043		3.018	

Coefficients in brackets are less than 1.96 times their standard errors.

** I constructed the squared terms to be uncorrelated with the linear terms and the interactions to be uncorrelated with their components. Table 19 describes these constructions.

TABLE 13 B: REGRESSION OF YEARS OF EDUCATION ON CHARACTERISTICS OF CIVILIAN MALES AGED 45-59 IN 1966 WITH EARNINGS AND NOT IN SCHOOL BY RACE: N.L.S. COMPLETE DATA SAMPLE (N = 2830)

F50

Independent Variables	White		Non White	
	B (S.E.)	Zero Order Correlation	B (S.E.)	Zero Order Correlation
Father's Education	.2861 (.018)	.416	.2609 (.077)	.243
Father's Occupation	.0356 (.006)	.385	[.0205] (.051)	.222
Father White Collar	[-.2928] (.324)	.335	[1.7041] (2.872)	.247
Father Not At Home	-1.5267 (.154)	-.152	-2.3603 (.530)	-.097
Non Farm Upbringing	1.1418 (.142)	.283	2.2207 (.490)	.362
Non Southern Upbringing	.5247 (.138)	.138	1.5828 (.551)	.287
Age	-.0791 (.014)	-.101	-.1603 (.054)	-.200
Constant	10.701		12.936	
R^2	.284		.292	
S.D. of Residuals	2.977		3.586	
N	2580		250	

Coefficients in brackets are less than 1.96 times their standard errors.

TABLE 13 D: REGRESSION OF YEARS OF EDUCATION ON CHARACTERISTICS OF CIVILIAN MALES AGED 45-59 IN 1966 WITH EARNINGS AND NOT IN SCHOOL BY FATHER'S OCCUPATION: N.L.S. COMPLETE DATA SAMPLE (N =2830)

F51

Independent Variables	White Collar B (S.E.)	Zero Order Correlation	Blue Collar B (S.E.)	Zero Order Correlation	Farm B (S.E.)	Zero Order Correlation
Father's Education	.2405 (.028)	.376	.2210 (.031)	.187	.3815 (.033)	.420
Father's Occupation	.0324 (.010)	.203	.0449 (.008)	.064	[.1952] (.108)	.094
No Male At Home	a	0.0	-1.8006 (.190)	-.235	a	0.0
Non Southern Upbringing	[.3398] (.292)	.041	1.1544 (.202)	.232	[.3953] (.236)	.155
Age	[.0004] (.029)	-.023	-.1265 (.019)	-.158	-.0819 (.027)	-.138
White	[.0112] (.768)	.022	1.4466 (.292)	.239	1.7346 (.384)	.236
Constant	8.223		12.425		6.504	
R^2	.161		.192		.216	
S.D. of Residuals	2.783		3.081		3.197	
N	550		1438		825	

a) I assigned respondents who did not live with their father the mean on Father's Occupation. The mean is a blue collar occupation. Thus, there is no variance in No Male At Home in the White Collar and farm samples

b) Coefficients in brackets are less than 1.96 times their standard errors.

c) See table 1 for a definition of Father White Collar. I classified Farmers, Farm Managers, Farm laborers and Foreman as Father Farm. All other occupations are Blue Collar.

TABLE 14 A: REGRESSION OF OCCUPATION ON CHARACTERISTICS OF CIVILIAN MALES AGED 45-59 IN 1966 WITH EARNINGS AND NOT IN SCHOOL: N.L.S. COMPLETE DATA SAMPLE (N = 2830).

Independent Variables	Standardized (Beta) and Unstandardized (B) Regression Coefficient (and Standard Error) for Selected Equations								
	Zero-Order Correlations	B (1) (S.E.)	BETA	B (2) (S.E.)	BETA	B (5) (S.E.)	BETA	B (6) (S.E.)	BETA
White	.216	12.6778 (1.537)	.145	12.9083 (1.540)	.148	12.7350 (1.539)	.146	8.6644 (1.320)	.099
Father's Education	.320	1.1766 (.128)	.174	1.1946 (.128)	.176	1.2004 (.128)	.177	[.1580] (.113)	.023
Father's Occupation	.381	.1914 (.046)	.161	.1817 (.046)	.152	.1831 (.046)	.154	[.0499] (.039)	.042
White Collar Father	.346	[3.1930] (2.336)	.050	[3.0628] (2.335)	.048	[2.7360] (2.334)	.043	[3.3051] (1.979)	.052
No Male at Home	-.081	-4.7648 (1.043)	-.077	-3.9791 (1.108)	-.064	-3.1737 (1.153)	-.051	[.6109] (.997)	.010
Non Farm Upbringing	.323	10.3739 (.983)	.200	10.4574 (.983)	.202	10.3547 (.983)	.200	6.5376 (.850)	.126
Non Southern Upbringing	.149	[.9380] (.995)	.017	[1.0940] (.997)	.020	[1.0521] (.996)	.019	[.0268] (.850)	.000
Father Native Born	-.011	[1.3672] (1.064)	.023	[1.6769] (1.073)	.028	[1.6512] (1.076)	.028	[1.7559] (.911)	.030
Father's Education Squared**	.098	+		.0436 (.021)	.038	.0683 (.025)	.059	[.0327] (.021)	.028
Father's Occupation X Father's Eduation**	-.004	[-]		-		-.0102 (.005)	-.039	-.0095 (.004)	-.036
Father's Occupation X Non Farm Upbringing**	.083	+		+		.1958 (.078)	.044	[.0698] (.066)	.016
Years of Education	.605	+		+		+		1.7252 (.160)	.256
Years of Higher Education	.556	+		+		+		3.6840 (.599)	.240
B.A.	.505	+		+		+		[4.7387] (2.645)	.061
Vocational Training	.252	+		+		+		6.6009 (.725)	.133
Work Experience	-.388	-		-		-		[+]	
Education X Non Farm**	.121	+		+		+		+	
Education X White**	.085	+		+		+		+	
Constant		3.581		5.214		6.908		-3.448	
R2		.238		.240		.242		.459	
S.D. of Residuals		21.675		21.662		21.633		18.288	

TABLE 14 A: Page 2

Standardized (Beta) and Unstandardized (B) Regression Coefficient (and Standard Error) for Selected Equations

Independent Variables	B (7) (S.E.)	BETA	B (8) (S.E.)	BETA
White	8.6563 (1.322)	.099	8.8617 (1.319)	.102
Father's Education	[.1585] (.113)	.023	[.1635] (.113)	.024
Father's Occupation	[.0497] (.039)	.042	[.0221] (.039)	.019
White Collar Father	[3.3036] (1.979)	.052	[3.5037] (1.971)	.055
No Male at Home	[.6112] (.997)	.010	[.8486] (.994)	.014
Non Farm Upbringing	6.5406 (.850)	.126	6.7794 (.848)	.131
Non Southern Upbringing	[.0234] (.851)	.000	[-.0707] (.847)	-.001
Father Native Born	[1.7596] (.911)	.030	[1.5796] (.908)	.027
Father's Education Squared**	[.0327] (.021)	.028	[.0347] (.021)	.030
Father's Occupation X Father's Education**	-.0095 (.004)	-.036	-.0108 (.004)	-.042
Father's Occupation X Non Farm Upbringing**	[.0695] (.066)	.016	[.0616] (.066)	.014
Years of Education	1.7336 (.174)	.257	1.9664 (.179)	.292
Years of Higher Education	3.6873 (.600)	.240	3.1077 (.608)	.202
B.A.	[4.7379] (2.646)	.061	[5.0678] (2.635)	.065
Vocational Training	6.6125 (.731)	.133	6.7086 (.728)	.135
Work Experience	[.0100] (.082)	.002	[.0372] (.082)	.008
Education X Non Farm**	+		.9030 (.220)	.062
Education X White**	+		.8578 (.301)	.040
Constant	-3.874		4.087	
R^2	.459		.464	
S.D. of Residuals	18.291		18.210	

Notes:

Coefficients in brackets are less than 1.96 times their standard errors.

** I constructed the squared terms to be uncorrelated with the linear terms and the interactions to be uncorrelated with their components. Table 19 describes these constructions.

TABLE 14 B: REGRESSION OF OCCUPATION ON CHARACTERISTICS OF CIVILIAN MALES AGED 45-59 IN 1966 WITH EARNINGS AND NOT IN SCHOOL BY RACE: N.L.S. COMPLETE DATA SAMPLE (N = 2830)

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Independent Variables	White		Non White	
	B (S.E.)	Zero Order Correlation	B (S.E.)	Zero Order Correlation
Father's Education	[.1984] (.118)	.315	[-.1714] (.295)	.161
Father's Occupation	[.0430] (.040)	.377	[.0234] (.189)	.258
Father White Collar	[3.6025] (2.039)	.344	[4.7072] (10.676)	.265
Father Not At Home	[.6098] (.987)	-.044	[-.7217] (2.050)	-.045
Non Farm Upbringing	6.8369 (.906)	.318	[2.3768] (1.896)	.254
Non Southern Upbringing	[-.6119] (.875)	.082	[1.0030] (2.087)	.197
Years of Education	2.0427 (.194)	.593	.6711 (.322)	.552
Years of Higher Education	3.1123 (.643)	.550	7.2192 (2.256)	.628
B.A.	5.4133 (2.747)	.501	[-.8571] (10.921)	.583
Vocational Training	6.7173 (.774)	.232	4.6644 (2.050)	.261
Work Experience	[-.0325] (.780)	-.378	[.2334] (1.971)	-.398
Work Experience Squared	[.0010] (.011)	-.366	[-.0052] (.028)	-.376
Constant	3.369		8.912	
R^2	.434		.472	
S.D. of Residuals	18.672		13.249	
N	2580		250	

Coefficients in Brackets are less than 1.96 times their standard errors.

TABLE 14 D: REGRESSION OF OCCUPATION ON CHARACTERISTICS OF CIVILIAN MALES AGED 45-59 IN 1966 WITH EARNINGS AND NOT IN SCHOOL BY FATHER'S OCCUPATION: N.L.S. COMPLETE DATA SAMPLE (N = 2830)

Independent Variables	White Collar		Blue Collar		Farm	
	B (S.E.)	Zero Order Correlation	B (S.E.)	Zero Order Correlation	B (S.E.)	Zero Order Correlation
Father's Education	[.0866] (.194)	.256	[.3514] (.193)	.156	[.2614] (.189)	.208
Father's Occupation	[.0159] (.067)	.157	[.0336] (.053)	.072	[-.7840] (.574)	-.021
No Male At Home	a	.0	[.8055] (1.209)	-.103	a	.0
Non Southern Upbringing	[.0910] (1.930)	.023	[1.3402] (1.261)	.170	[-1.6043] (1.262)	.014
Years of Education	3.2902 (.592)	.622	2.2316 (.246)	.557	.9646 (.268)	.457
Years of Higher Education	[1.9628] (1.183)	.608	4.2041 (.893)	.475	[1.3340] (1.307)	.463
B.A.	[6.4172] (4.232)	.572	[-1.9835] (4.179)	.392	24.2007 (6.372)	.452
Vocational Training	6.3071 (1.612)	.062	4.7238 (1.054)	.224	10.4563 (1.309)	.326
Work Experience	[.3626] (.187)	-.316	[-.1417] (.118)	-.372	[.1207] (.140)	-.308
White	11.7090 (5.058)	.087	9.3108 (1.824)	.235	6.8611 (2.043)	.177
Constant	-21.746		1.760		12.628	
R^2	.431		.360		.339	
S.D. of Residuals	18.299		18.942		16.756	
N	550		1438		825	

a) I assigned respondents who did not live with their father the mean on Father's Occupation. The mean is a Blue Collar Occupation. Thus, there is no variance in No Male At Home in the White Collar and farm samples.

b) Coefficients in brackets are less than 1.96 times their standard errors.

c) see note c, table 13D

Table 15A: Regression of Earnings (1966) on Characteristics of Civilian Males Aged 45-59 in 1966 with Earnings and Not in School: N.L.S. Complete Data Sample (N= 2830)

Independent Variables	Zero Order Correlations	B (1) (S.E.)	Beta	B (2) (S.E.)	Beta	B (5) (S.E.)	Beta
White	.173	1928.1296 (377.762)	.094	1997.7593 (378.370)	.097	2029.1709 (378.943)	.098
Father's Education	.286	302.8845 (31.362)	.189	308.3357 (31.403)	.193	314.3091 (31.485)	.196
Father's Occupation	.316	36.1533 (11.219)	.128	33.2220 (11.266)	.118	34.0892 (11.254)	.121
White Collar Father	.287	[607.0979] (574.047)	.040	[567.7522] (573.689)	.038	[537.8948] (572.820)	.036
No Male At Home	-.097	-1446.7332 (256.228)	-.099	-1209.3877 (272.259)	-.083	-937.3745 (284.665)	-.064
NonFarm Upbringing	.256	1645.3918 (241.645)	.134	1670.6133 (241.609)	.136	1587.1309 (242.226)	.130
NonSouthern Upbringing	.150	[299.5427] (244.517)	.023	[346.6670] (244.970)	.027	[364.2080] (244.574)	.028
Father Native Born	-.036	-1020.5364 (261.396)	-.073	-926.9761 (263.686)	-.066	-1012.8796 (264.147)	-.072
Father's Education Squared**	.113	+		13.1621 (5.143)	.048	11.6059 (5.152)	.042
Father's Occupation x NonFarm Upbringing**	.081	+		+		45.6873 (19.123)	.043
Father's Occupation x White **	.048	+		+		58.0385 (25.035)	.040
No Male At Home x Father Native Born**	.013	[+]		[+]		1218.8494 (590.334)	.036
Years of Education	.476	+		+		+	
Years of Higher Education	.446	+		+		+	
B.A.	.406	+		+		+	
Vocational Training	.131	+		+		+	
Work Experience	-.315	–		–		–	
Education x White **	.099	+		+		+	

Table 15A Pg. 2

F57

Independent Variable	Zero Order Correlations	B (1) (S.E.)	Beta	B (2) (S.E.)	Beta	B (5) (S.E.)	Beta
Education x Father's Occ.**	.105	+		+		+	
Work Experience x Father's Occ.**	-.003	[-]		[+]		[+]	
Occupation	.541	+		+		+	
Constant		2648.904		3142.272		5291.863	
R^2		.176		.178		.182	
SD of Residuals		5327.234		5322.004		5311.191	

Independent Variable	B (6) (S.E.)	Beta	B (7) (S.E.)	Beta	B (8) (S.E.)	Beta	B (9) (S.E.)	Beta
White	1419.6189 (357.527)	.069	1448.4060 (357.920)	.070	1454.0811 (356.080)	.071	762.1873 (342.852)	.037
Father's Education	138.7946 (30.583)	.087	137.3030 (30.591)	.086	128.7936 (30.521)	.080	117.2266 (29.173)	.073
Father's Occupation	[10.8063] (10.529)	.038	[11.4949] (10.536)	.041	[10.6699] (10.492)	.038	[6.9892] (10.028)	.025
White Collar Father	[639.8669] (533.916)	.042	[645.0972] (533.794)	.043	[679.7834] (530.905)	.045	[397.7058] (507.584)	.026
No Male At Home	[-269.2925] (270.817)	-.018	[-270.3101] (270.750)	-.018	[-118.6809] (271.557)	-.008	[-186.2026] (259.512)	-.013
NonFarm Upbringing	1002.2317 (230.139)	.082	991.5916 (230.184)	.081	1014.1406 (229.069)	.083	502.6926 (221.094)	.041
NonSouthern Upbringing	[188.5947] (229.573)	.015	[200.2891] (229.640)	.016	[214.7060] (228.439)	.017	[205.3854] (218.280)	.016
Father Native Born	-990.7092 (245.805)	-.070	-1003.5745 (245.884)	-.071	-1024.1206 (244.669)	-.073	-1144.9067 (233.903)	-.081
Father's Ed. Squared**	[5.4365] (4.905)	.020	[5.4103] (4.904)	.020	[3.5398] (4.994)	.013	[2.7604] (4.772)	.010
Father's Occ. x NonFarm Upbring**	[21.6594] (17.820)	.021	[22.8332] (17.832)	.022	[12.9788] (18.056)	.012	[8.0985] (17.256)	.008
Father's Occ. x White **	68.2189 (23.284)	.048	68.0662 (23.279)	.047	[40.0055] (23.923)	.028	[37.8048] (22.859)	.026
No Male At Home x Fa Native Born	[1035.4534] (549.624)	.031	[1049.9856] (549.567)	.031	[921.2859] (547.245)	.027	[751.9937] (523.008)	.022
Years of Education	312.0415 (43.105)	.196	283.1082 (46.965)	.178	339.3801 (48.668)	.213	193.6318 (47.346)	.122
Years of Higher Education	691.3027 (161.684)	.191	680.2729 (161.801)	.187	527.3076 (164.187)	.145	[257.3452] (157.747)	.071
B.A.	[605.3855] (714.239)	.033	[607.7639] (714.063)	.033	[556.7939] (711.817)	.030	[162.7859] (680.583)	.009
Vocational Training	[349.1157] (195.817)	.030	[309.1062] (197.463)	.026	[326.4375] (196.906)	.028	[-193.1063] (190.800)	-.016
Work Experience	[-]		[-34.1897] (22.062)	-.032	[-34.6376] (21.958)	-.032	[-35.6910] (20.982)	-.033
Education x White **	+		+		286.1011 (83.417)	.057	212.9395 (79.832)	.042

Table 15A Pg. 4

Independent Variable	B (6) (S.E.)	Beta	B (7) (S.E.)	Beta	B (8) (S.E.)	Beta	B (9) (S.E.)	Beta
Education x Fa's Occ.**	+		+		8.6475 (1.848)	.105	8.0300 (1.766)	.097
Work Exper. x Fa's Occ.**	[+]		[+]		4.2886 (1.039)	.082	3.6487 (.994)	.069
Occupation	+		+		+		79.3565 (4.842)	.336
Constant	3682.445		5143.707		12634.098		11515.844	
R^2	.294		.295		.304		.365	
SD of Residuals	4937.465		4936.234		4906.680		4688.449	

Coefficients in brackets are less than 1.96 times their standard errors.

** I constructed the squared terms to be uncorrelated with the linear terms and the interactions to be uncorrelated with their components. Table 19 describes these constructions.

TABLE 15 B: REGRESSION OF EARNINGS (1966) ON CHARACTERISTICS OF CIVILIAN MALES AGED 45-59 IN 1966 WITH EARNINGS AND NOT IN SCHOOL BY RACE: N.L.S. COMPLETE DATA SAMPLE (N = 2830)

Independent Variables	White		Non White	
	B (S.E.)	Zero Order Correlation	B (S.E.)	Zero Order Correlation
Father's Education	99.0758 (31.926)	.280	[117.0057] (78.942)	.160
Father's Occupation	[10.9662] (10.944)	.315	[-33.0329] (50.610)	.073
Father White Collar	[707.0684] (552.303)	.287	[1364.7898] (2861.662)	.094
Father Not At Home	[-503.7021] (267.443)	-.073	[-194.6950] (549.570)	-.025
Non Farm Upbringing	1270.6853 (245.405)	.251	[606.2986] (508.111)	.189
Non Southern Upbringing	488.6628 (237.133)	.105	[-104.7999] (559.381)	.092
Years of Education	302.8640 (52.439)	.470	[156.0068] (86.253)	.330
Years of Higher Education	756.8992 (174.326)	.449	[-197.5869] (604.614)	.244
B.A.	[682.8958] (744.125)	.410	[1988.0793] (2927.256)	.233
Vocational Training	[363.8555] (209.659)	.112	[151.2904] (549.468)	.142
Work Experience	[240.1337] (211.219)	-.308	[-432.7373] (528.260)	-.269
Work Experience Squared	[-3.9168] (3.112)	-.300	[5.2235] (7.402)	-.258
Constant	-1594.887		11787.957	
R^2	.276		.137	
S.D. of Residuals	5058.734		3551.299	
N	2580		250	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 16A: Regression of Ln Earnings on Characteristics of Civilian Males Aged 45-59 in 1966 With Earnings and Not in School: N.L.S. Complete Data Sample (N=2830)

Independent Variable	Zero Order Correlation	B (1) (S.E.)	Beta	B (2) (S.E.)	Beta	B (5) (S.E.)	Beta	B (6) (S.E.)	Beta
White	.196	.4136 (.058)	.133	.4111 (.058)	.132	.3992 (.058)	.128	.2680 (.056)	.086
Father's Education	.230	.0363 (.005)	.150	.0361 (.005)	.150	.0367 (.005)	.152	.0122 (.005)	.050
Father's Occupation	.244	[.0016] (.002)	.038	[.0017] (.002)	.040	[.0018] (.002)	.042	[-.0010] (.002)	-.024
White Collar Father	.221	[.0931] (.088)	.041	[.0945] (.088)	.041	[.0903] (.088)	.040	[.1038] (.084)	.046
No Male At Home	-.060	-.1286 (.039)	-.058	-.1371 (.042)	-.062	-.1397 (.042)	-.063	[-.0053] (.041)	-.002
Nonfarm Upbringing	.285	.3833 (.037)	.208	.3824 (.037)	.207	.3736 (.037)	.202	.2591 (.036)	.140
Nonsouth Upbringing	.153	[.0463] (.037)	.024	[.0447] (.038)	.023	[.0334] (.038)	.017	[-.0144] (.036)	-.007
Father Native Born	-.078	-.0829 (.040)	-.039	-.0862 (.040)	-.041	-.0974 (.041)	-.046	-.1070 (.039)	-.051
Father's Ed Squared**	.032	[-]		[-.0005] (.001)	-.011	[-.0012] (.001)	-.028	[-.0009] (.001)	-.022
Father's Ed x Fa Native Born**	.095	+		+		.0323 (.010)	.058	.0313 (.010)	.056
Education (Years of)	.438	+		+		+		.0740 (.007)	.308
Years of Higher Ed	.312	+		+		+		[.0067] (.025)	.012
B.A.	.275	+		+		+		[.0695] (.112)	.025
Vocational Training	.177	+		+		+		.1091 (.031)	.062
Work Experience	-.320	-		-		-		-	
Work Exper x Education**	.044	[+]		[+]		[+]		+	
Natural Log of Weeks Worked	.271	+		+		+		+	
Occupation	.462	+		+		+		+	
Constant		7.835		7.818		7.965		7.607	
R^2		.148		.148		.151		.237	
SD of Residuals		.817		.817		.815		.774	

Table 16A: continued

Independent Variable	B (7) (S.E.)	Beta	B (8) (S.E.)	Beta	B (9) (S.E.)	Beta	B (10) (S.E.)	Beta
White	.2789 (.055)	.090	.2736 (.056)	.088	.2593 (.054)	.083	.1787 (.053)	.057
Father's Education	.0116 (.005)	.048	.0116 (.005)	.048	.0109 (.005)	.045	.0096 (.005)	.040
Father's Occupation	[-.0008] (.002)	-.018	[-.0008] (.002)	-.020	[-.0007] (.002)	-.016	[-.0012] (.002)	-.027
White Collar Father	[.1062] (.083)	.047	[.1019] (.083)	.045	[.0832] (.081)	.036	[.0514] (.079)	.023
No Male At Home	[-.0073] (.041)	-.003	[-.0062] (.041)	-.003	[-.0110] (.039)	-.005	[-.0141] (.038)	-.006
Nonfarm Upbringing	.2557 (.036)	.138	.2558 (.036)	.138	.2563 (.035)	.139	.1950 (.034)	.106
Nonsouth Upbringing	[-.0098] (.036)	-.005	[-.0067] (.036)	-.003	[-.0036] (.035)	-.002	[-.0038] (.034)	-.002
Father Native Born	-.1111 (.038)	-.052	-.1078 (.038)	-.051	-.1076 (.037)	-.051	-.1230 (.036)	-.058
Father's Ed Squared**	[-.0009] (.001)	-.021	[-.0008] (.001)	-.019	[-.0005] (.001)	-.013	[-.0006] (.001)	-.015
Father's Ed x Fa Native Born	.0303 (.010)	.054	.0311 (.010)	.056	.0253 (.009)	.045	.0248 (.009)	.044
Education (Years of)	.0634 (.007)	.264	.0546 (.008)	.228	.0482 (.008)	.201	.0318 (.008)	.133
Years of Higher Ed	[.0027] (.025)	.005	[.0319] (.028)	.058	[.0430] (.027)	.079	[.0090] (.026)	.016
B.A.	[.0702] (.112)	.025	[.0719] (.112)	.026	[.0304] (.109)	.011	[-.0125] (.106)	-.005
Vocational Training	.0944 (.031)	.053	.0965 (.031)	.055	.1012 (.030)	.057	[.0386] (.030)	.022
Work Experience	-.0126 (.003)	-.078	-.0121 (.003)	-.075	-.0112 (.003)	-.069	-.0113 (.003)	-.071
Work Exper x Education**	+		.0024 (.001)	.058	.0021 (.001)	.050	.0022 (.001)	.052
Natural Log of Weeks Worked	+		+		.7487 (.058)	.210	.7008 (.056)	.196
Occupation	+		+		+		.0094 (.001)	.264
Constant	8.134		9.094		6.092		6.342	
R^2	.241		.242		.285		.323	
SD of Residual	.772		.771		.749		.729	

Notes to table 16A:

Coefficients in brackets are less than 1.96 times their standard errors.

** I constructed the squared terms to be uncorrelated with the linear terms and the interactions to be uncorrelated with their components. Table 19 describes the constructions.

TABLE 16 B: REGRESSION OF LN EARNINGS ON CHARACTERISTICS OF CIVILIAN MALES AGED 45-59 IN 1966 WITH EARNINGS AND NOT IN SCHOOL BY RACE: N.L.S. COMPLETE DATA SAMPLE (N = 2830)

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Independent Variables	White B (S.E.)	White Zero Order Correlation	Non White B (S.E.)	Non White Zero Order Correlation
Father's Education	[.0065] (.005)	.218	[.0294] (.021)	.181
Father's Occupation	[-.0010] (.002)	.243	[-.0020] (.013)	.114
Father White Collar	[.1148] (.083)	.222	[.0835] (.756)	.122
Father Not At Home	[.0009] (.040)	-.034	[.0033] (.145)	.033
Non Farm Upbringing	.2793 (.037)	.277	[.2626] (.134)	.249
Non Southern Upbringing	[.0387] (.036)	.102	[-.0840] (.148)	.078
Years of Education	.0657 (.008)	.421	.0488 (.023)	.339
Years of Higher Education	[.0147] (.026)	.316	[-.1127] (.160)	.189
B.A.	[.0407] (.111)	.278	[.5846] (.773)	.181
Vocational Training	.0981 (.031)	.157	[.0559] (.145)	.169
Work Experience	[.0288] (.032)	-.310	[.0247] (.140)	-.299
Work Experience Squared	[-.0006] (.000)	-.307	[-.0007] (.002)	-.296
Constant	7.489		7.537	
R^2	.215		.157	
S.D. of Residuals	.758		.938	
N	2580		250	

Coefficients in brackets are less than 1.96 times their standard errors.

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TABLE 16 D: REGRESSION OF LN EARNINGS ON CHARACTERISTICS OF CIVILIAN MALES AGED 45-59 IN 1966 WITH EARNINGS AND NOT IN SCHOOL BY FATHER'S OCCUPATION: N.L.S. COMPLETE DATA SAMPLE (N = 2830)

Independent Variables	White Collar		Blue Collar		Farm	
	B (S.E.)	Zero Order Correlation	B (S.E.)	Zero Order Correlation	B (S.E.)	Zero Order Correlation
Father's Education	[.0098] (.006)	.263	[-.0033] (.007)	.048	[.0146] (.012)	.189
Father's Occupation	[.0002] (.002)	.127	[-.0010] (.002)	-.020	[-.0404] (.036)	-.007
No Male At Home	a	.0	[-.0455] (.041)	-.159	a	.0
Non Southern Upbringing	[.0317] (.057)	.042	.1230 (.043)	.198	[-.0648] (.078)	.046
Years of Education	.1010 (.018)	.533	.0511 (.008)	.400	.0782 (.017)	.337
Years of Higher Education	[.0194] (.035)	.481	[.0083] (.030)	.266	[-.0638] (.081)	.184
B.A.	[.0166] (.126)	.438	[.0502] (.141)	.222	[.1897] (.395)	.159
Vocational Training	[.0563] (.048)	.001	[.0326] (.036)	.138	.1933 (.081)	.200
Work Experience	[.0064] (.006)	-.280	-.0165 (.004)	-.316	-.0187 (.009)	-.270
White	.5303 (.151)	.142	.2806 (.062)	.230	.2798 (.127)	.149
Constant	6.908		8.520		8.535	
R^2	.310		.197		.138	
S.D. of Residuals	.544		.640		1.040	
N	550		1438		825	

a) I assigned respondents who did not live with their father the mean on Father's Occupation. The mean is a blue collar occupation. Thus, there is no variance in No Male At Home in the White Collar and farm samples.

b) coefficients in brackets are less than 1.96 times their standard errors.

c) See note c, table 13D

Table 17A: Regression of Earnings$^{1/3}$ on Characteristics of Civilian Males Aged 45-57 in 1966 with Earnings and Not in School: N.L.S. Complete Data Sample (N= 2830)

Independent Variables	Zero Order Correlations	B (1) (S.E.)	Beta	B (2) (S.E.)	Beta	B (5) (S.E.)	Beta	B (6) (S.E.)	Beta	B (7) (S.E.)	Beta	B (8) (S.E.)	Beta	B (9) (S.E.)	Beta
White	.217	2.1227 (.283)	.136	2.1319 (.283)	.136	2.0820 (.284)	.133	1.4068 (.266)	.090	1.4540 (.266)	.093	1.4065 (.265)	.090	.8700 (.254)	.056
Father's Education	.286	.2316 (.023)	.190	.2323 (.024)	.191	..2350 (.024)	.193	.0904 (.023)	.074	.0878 (.023)	.072	.0844 (.023)	.069	.0761 (.022)	.063
Father's Occupation	.303	.0182 (.008)	.085	.0178 (.008)	.083	.0181 (.008)	.085	[.0007] (.008)	.003	[.0018] (.008)	.008	[.0001] (.008)	.000	[-.0027] (.007)	-.013
White Collar Father	.273	[.4089] (.429)	.036	[.4037] (.430)	.035	[.3361] (.429)	.034	[.4642] (.396)	.040	[.4744] (.397)	.041	[.4827] (.396)	.042	[.2546] (.376)	.022
No Male At Home	-.089	-.9702 (.192)	-.087	-.9390 (.204)	-.084	-.9502 (.204)	.-086	[-.2250] (.193)	-.020	[-.2333] (.193)	-.021	[-.2104] (.193)	-.019	[-.2384] (.183)	-.021
NonFarm Upbringing	.308	1.8736 (.181)	.201	1.8770 (.181)	.202	1.8399 (.181)	.198	1.2328 (.171)	.132	1.2182 (.171)	.131	1.2279 (.170)	.132	.8163 (.164)	.088
NonSouthern Upbringing	.181	[.3521] (.183)	.036	[.3583] (.183)	.037	[.3112] (.184)	.032	[.0807] (.172)	.008	[.1006] (.171)	.010	[.1171] (.171)	.012	[.1168] (.163)	.012
Father Native Born	-.092	-.6062 (.196)	-.057	-.5939 (.197)	-.056	-.6410 (.198)	-.060	-.6752 (.183)	-.063	-.6926 (.183)	-.065	-.6983 (.183)	-.065	-.7950 (.173)	-.074
Father's Educ. Squared**	.067	[+]		[.0017] (.004)	.008	[-.0012] (.004)	-.006	[-.0022] (.004)	-.011	[-.0021] (.004)	-.010	[-.0016] (.004)	-.008	[-.0021] (.004)	-.010
Father's Ed. x Fa Native Born**	.098	+		+		.1357 (.050)	.048	.1341 (.046)	.048	.1301 (.046)	.046	.1328 (.046)	.047	.1269 (.044)	.045
Years of Education	.515	+		+		+		.3668 (.032)	.303	.3210 (.035)	.265	.2967 (.038)	.245	.1801 (.037)	.149
Years of Higher Ed	.409	+		+		+		.2485 (.120)	.090	[.2311] (.120)	.084	.3250 (.131)	.118	[.1135] (.125)	.041
B.A.	.364	+		+		+		[.4011] (.532)	.029	[.4043] (.532)	.029	[.4641] (.530)	.033	[.1441] (.504)	.010

Table 17A: continued

Independent Variables	Zero Order Correlations	B (1) (S.E.)	Beta	B (2) (S.E.)	Beta	B (5) (S.E.)	Beta	B (6) (S.E.)	Beta	B (7) (S.E.)	Beta	B (8) (S.E.)	Beta	B (9) (S.E.)	Beta
Vocational Training	.183	+		+		+		.5205 (.146)	.058	.4567 (.147)	.051	.4675 (.146)	.053	[.0518] (.141)	.006
Work Experience	-.361	-		-		-		-		-.0544 (.016)	-.067	-.0501 (.016)	-.062	-.0516 (.016)	-.064
Education x White**	.064	+		+		+		+		+		.1966 (.061)	.052	.1368 (.058)	.036
Work Exp. x Education**	.002	[-]		[-]		[-]		+		+		.0116 (.004)	.055	.0117 (.004)	.056
Occupation	.561	+		+		+		+		+		+		.0627 (.004)	.349
Constant		13.989		14.054		14.673		12.936		15.214		21.013		20.918	
R^2		.201		.201		.203		.321		.324		.328		.393	
SD of Residuals		3.985		3.986		3.981		3.677		3.671		3.661		3.478	

Coefficients in brackets are less than 1.96 times their standard errors

** I constructed the squared terms to be uncorrelated with their linear terms and the interactions to be uncorrelated with their components. Table 19 describes the constructions.

TABLE 18 A: REGRESSION OF FAMILY INCOME ON CHARACTERISTICS OF CIVILIAN MALES AGED 45-59 IN 1966 WITH EARNINGS AND NOT IN SCHOOL: N.L.S. COMPLETE DATA SAMPLE (N = 2830)

Independent Variables	Zero Order Correlations	B (1) (S.E.)	BETA	B (2) (S.E.)	BETA	B (5) (S.E.)	BETA
White	.178	2369.8232 (435.388)	.100	2465.8501 (435.871)	.104	2496.2026 (436.844)	.106
Father's Education	.282	360.8018 (36.146)	.197	368.3193 (36.176)	.201	372.8479 (36.274)	.203
Father's Occupation	.294	29.5610 (12.930)	.092	25.5184 (12.978)	.079	26.1341 (12.975)	.081
White Collar Father	.271	[975.2351] (661.616)	.056	[920.9734] (660.872)	.053	[899.2480] (660.426)	.052
No Male At Home	-.104	-1751.6592 (295.314)	-.105	-1424.3367 (313.634)	-.085	-1212.3484 (326.411)	-.072
Non Farm Upbringing	.240	1788.8977 (278.507)	.127	1823.6797 (278.326)	.130	1757.6040 (278.958)	.125
Non Southern Upbringing	.144	[279.9126] (281.817)	.019	[344.9019] (282.198)	.024	[342.4929] (281.871)	.024
Father Native Born	-.083	-1179.2935 (301.271)	-.073	-1050.2637 (303.758)	-.065	-1108.3572 (304.113)	-.069
Father's Education Squared**	.119	+		18.1518 (5.925)	.058	17.2016 (5.928)	.055
Father's Occupation X Non Farm Upbringing**	.080	+		+		50.4795 (22.005)	.042
Father Not At Home X Father Native Born**	.016	[+]		[+]		1374.9329 (676.990)	.035
Years of Education	.478	+		+		+	
Years of Higher Education	.437	+		+		+	
B.A.	.396	+		+		+	
Vocational Training	.162	+		+		+	
Work Experience	-.318	-		-		-	
Education X White**	.074	+		+		+	
Education X Father's Occupation**	.090	+		+		+	
Work Experience X Father's Occupation**	-.012	[-]		[+]		[+]	
Occupation	.528	+		+		+	
Constant		4298.316		4978.723		5945.836	
R^2		.166		.169		.171	
S.D. of Residuals		6139.891		6130.785		6123.523	

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TABLE 18 A: Page 2

Independent Variables	B (S.E.) (6)	BETA	B (S.E.) (7)	BETA	B (S.E.) (8)	BETA	B (S.E.) (9)	BETA
White	1685.9106 (411.567)	.071	1717.3711 (412.039)	.073	1723.5908 (411.230)	.073	976.7793 (398.320)	.041
Father's Education	163.5951 (35.193)	.089	161.9732 (35.203)	.088	155.3268 (35.217)	.085	142.9718 (33.861)	.078
Father's Occupation	[-.8119] (12.121)	-.003	[-.0600] (12.130)	-.000	[-.7668 (12.117)	-.002	[-4.7274] (11.651)	-.015
White Collar Father	[1024.6733] (614.666)	.059	[1030.3733] (614.551)	.059	[1062.4749] (613.206)	.061	[757.2612] (589.782)	.044
No Male At Home	[-418.9988] (309.989)	-.025	[-419.9023] (309.925)	-.025	[-266.9622] (312.390)	-.016	[-337.4727] (300.319)	-.020
Non Farm Upbringing	1015.5859 (264.602)	.072	1003.8857 (264.667)	.072	1013.7195 (264.143)	.072	[459.8833] (256.495)	.033
Non Southern Upbringing	[121.1606] (264.208)	.008	[133.9692] (264.298)	.009	[148.3270] (263.772)	.010	[138.8547] (253.550)	.009
Father Native Born	-1087.4175 (282.569)	-.068	-1101.5579 (282.675)	-.068	-1134.9395 (282.332)	-.070	-1266.4998 (271.528)	-.079
Father's Education Squared**	11.2529 (5.637)	.036	11.2222 (5.636)	.036	[9.2090] (5.762)	.029	[8.3447] (5.539)	.027
Father's Occupation X Non Farm Upbringing**	[24.1321] (20.475)	.020	[25.4055] (20.489)	.021	[15.9393] (20.831)	.013	[10.5800] (20.027)	.009
Father Not At Home X Father Native Born**	[1065.9006] (629.410)	.027	[1082.1694] (629.378)	.028	[1031.5403] (628.013)	.027	[854.8333] (603.786)	.022
Years of Education	384.0808 (49.614)	.211	352.5010 (54.059)	.193	401.6711 (56.179)	.220	244.6470 (54.984)	.134
Years of Higher Education	743.9429 (186.133)	.179	731.9104 (186.275)	.176	604.0322 (189.413)	.145	[313.2051] (183.070)	.075
B.A.	[621.6467] (822.209)	.030	[624.1848] (822.042)	.030	[570.1077] (822.121)	.027	[143.4956] (790.755)	.007
Vocational Training	839.1294 (225.422)	.062	795.4370 (227.328)	.059	811.8135 (227.414)	.060	[250.2576] (221.685)	.019
Work Experience	[-]		[-37.3248] (25.400)	-.031	[-37.3222] (25.363)	-.031	[-38.4678] (24.380)	-.031
Education X White**	+		+		241.0684 (93.551)	.042	[160.0478] (90.082)	.028
Education X Father's Occupation**	+		+		6.9068 (2.127)	.073	6.2239 (2.045)	.066
Work Experience X Father's Occupation**	[+]		[+]		3.1443 (1.200)	.052	2.4499 (1.154)	.041
Occupation	+		+		+		85.7284 (5.626)	.317
Constant	3679.044		5277.855		11502.406		10326.059	
R^2	.287		.287		[illegible]		[illegible]	

Notes to table 18A

Coefficients in brackets are less than 1.96 times their standard errors.

** I constructed the squared terms to be uncorrelated with the linear terms and the interactions to be uncorrelated with their components. Table 19 describes the constructions.

TABLE 18 B: REGRESSION OF FAMILY INCOME ON CHARACTERISTICS OF CIVILIAN MALES AGED 45-59 IN 1966 WITH EARNINGS AND NOT IN SCHOOL BY RACE: N.L.S. COMPLETE DATA SAMPLE (N = 2830)

Independent Variables	White B (S.E.)	White Zero Order Correlation	Non White B (S.E.)	Non White Zero Order Correlation
Father's Education	130.4613 (36.744)	.278	[1.1464] (95.689)	.125
Father's Occupation	[-.0101] (12.596)	.289	[-13.1402] (61.347)	.169
Father White Collar	[1065.3555] (635.666)	.267	[2017.7161] (3468.734)	.194
Father Not At Home	-662.8455 (307.810)	-.079	[402.8962] (666.156)	-.043
Non Farm Upbringing	1270.1594 (282.445)	.230	[863.4275] (615.901)	.225
Non Southern Upbringing	[425.7935] (272.926)	.094	[-20.9709] (678.047)	.135
Years of Education	366.5752 (60.354)	.464	[205.2984] (104.551)	.409
Years of Higher Education	780.0767 (200.639)	.434	[651.7390] (732.876)	.376
B.A.	[734.8982] (856.440)	.394	[800.2515] (3548.243)	.350
Vocational Training	841.7756 (241.304)	.141	[662.0354] (666.031)	.192
Work Experience	[128.6157] (243.099)	-.310	[-88.8068] (640.325)	-.300
Work Experience Squared**	[-2.3336] (3.582)	-.301	[.6501] (8.972)	-.287
Constant	1778.170		6529.813	
R^2	.262		.213	
S.D. of Residuals	5822.281		4304.668	
N	2580		250	

Coefficients in brackets are less than 1.96 times their standard errors.

I constructed the squared term to be uncorrelated with the linear term. Table 19 describes this construction.

Table 19

Squared Terms

Father's Education Squared = Father's Ed x (Father's Ed - (0.940x62.545/3.659))

Interaction Terms

Education x Father's Occupation = (EDxFather's Occ)-(1/(1-0.378^2))x((0.631-(0.378x0.927))x(320.908/3.681)xED+(0.927-(0.378x0.631))x(320.908/20.810) xFather's Occ.)

Education x Race = (EDxRace)-(1/(1-0.235^2))x((0.833-(0.235x).672))x(4.530/3.681) xEd+(0.672-(0.235x0.833))x(4.530/0/284)xRace)

Education x Nonfarm Upbringing = (EdxNonfarm)-(1/(1-0.304^2))x((0.613-(0.304*0.890)) x(6.061/3.681)xEd+(0.890-(0.304x0.613))x(6.061/0.478)xNonfarm)

Father's Occupation x Race = (Father's Occ x Race)-(1/(1-0.090^2))x((0.933-(0.090x 0.391))x(22.059/20.810)xFather's Occ+(0.391-(0.090x0.933))x(22.059/0.284)x White)

Father's Occupation x Age = (Father's Occ x Age)-(1/(1-0.051^2))x((0.990-(0.051 x0.165))x(1088.461/20.810)xFather's Occ+(0.165-(0.051x0.990))x(1088.461/4.212) xAge)

Father's Occupation x Father's Education = (Father's OccxFather's Ed)-(1/(1-0.442^2)) x((0.853-(0.442x0.735))x(287.476/20.810)xFather's Occ+(0.735-(0.442x0.855))x (287.476/3.659)x Father's Ed)

Father's OccupationxNonfarm Upbringing = (Father's Occ x Nonfarm)-(1/1-0.428^2)) x((0.914-(0.428x0.697))x(24.945/20.810)xFather's Occ+(0.697-(0.428x0.914)) x(24.945/0.478)xNonfarm)

Race x Father Native Born = (Race x Native)-(1/(1-$(-0.116)^2$))x((0.469-(0.116x 0.808))x(0.461/0.284)xRace+(0.808-(-0.116x0.469))x(0.461/0.417)xNative)

No Male At Home x NonFarm Upbringing = (No Male x NonFarm)-(1/(1-0.094^2))x((0.830-(0.094x0.308))x(0.355/0.401)xNo Male+(0.308-(0.094x0.830))x(0.355/0.478)x Nonfarm)

No Male At Home x Father Native Born = (No Male x Native)-(1/(1-$(-0.038)^2$))x ((0.836-(-0.038x0.225))x(0.357/0.401)xNo Male+(0.0225-(-0.038x0.836))- (0.357/0.417)xNative)

Father's Education x Nonfarm Upbringing= (Father's Ed x Nonfarm)-(1/(1-0.174^2))x ((0.647-(0.174x0.786))x(4.878/3.659)xFather's Ed+(0.786-(0.174x0.647))x (4.878/0.478)xNonfarm)

Father's Education x Father Native Born = (Father's Ed x Native)-(1/(1-0.158^2))x ((0.699-(0.158x0.725))x(4.514/3.659)xFather's Ed+(0.725-(0.158x0.699))x (4.514/0.417)xNative)

Table 19 continued

Experience x Father's Occupation = (Experience x Father's Occ)-(1/(1-(-0.190)^{2}))x ((0.050-(-0.190x0.957))x(663.8/5.492)xExperience+(0.957-(0.190x0.050))x (663.8/20.810)xFatrer Occ)

Experience x Education = (Experience x Ed)-(1/1-(-0.625)^{2}))x ((-0.173-(-.0625x 0.858))x(99.472/5.492)xExperience+(0.858-(-0.625x-0.173))x(99.472/3.681)xEd)

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APPENDIX G

The 1964 Veterans Survey

By Christopher Jencks*

None of the supposedly representative national samples described in Appendices A-F Contains a conventional test of cognitive skills, though the PSID does contain a measure that purports to get at the same thing. This appendix, like the two that follow it, describes a data set which is less representative of the national population but which includes a standard test of academic ability achievement.

1. The Sample

In October 1964, the Current Population Survey sent a questionnaire to a representative sample of men in the civilian, non-institutional population whom it had identified as being between 16 and 34 in its May 1964 survey. About 5,442 of these men were between 25 and 34, and about 55 percent of these 25-34 year olds were veterans. 89 percent of the veterans returned the CPS questionnaire, and 77 percent of the veterans returning the questionnaire had an Armed Forces Qualification Test (AFQT) score in their Defense Department files. CPS thus ended up with both questionnaires and AFQT scores for (0.55) (0.89) (0.77) = 37 percent of its initial sample of 25-34 year olds. Of these men, 9 percent were students and an additional 1 percent did not expect to earn anything in 1964. This left 1815 men aged 25-34 who met the project's criteria for inclusion in the basic sample. 1438 of these men had data on all items. Table 0 summarizes the sources of sample attrition.

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*I am indebted to Zvi Griliches, Robert Hauser, Paul Taubman and my colleagues on this project for critical comments on an earlier draft of this appendix. I am even more indebted to Marsha Brown, Pamela Bullock, Tom Marx and Jill Williams for carrying out the tedious computer work.

CPS weighted the respondents in an effort to compensate for non-response both in the original CPS sample and in the subsample that returned the mail questionnaire.[1]

I will use these weights. This weighting procedure does not try to compensate for the biases introduced by eliminating men without AFQT scores or for differences between veterans and non-veterans. I set the mean weight at 1.000, which gave it a standard deviation of 0.534. This made the weighted N for the overall sample equal to the actual number of cases, though this is not always true for subsamples. I used the weighted N to calculate the standard errors of regression coefficients. I will describe any coefficient that is more than 1.96 times its standard error as "statistically significant."

The veterans sample is not fully representative of all men aged 25-34. The military has traditionally had a policy of rejecting men whose test scores fell below the 10th percentile. During most of the years relevant to this survey, the military also deferred students, fathers, and men over 26. Thus if a man stayed in school until he had a child, or until he reached 26, he could usually avoid military service. A sample of veterans therefore underrepresents men who attended graduate school. It also underrepresents men with less than 9 years of school, partly because such men were more likely to score below the 10th percentile on the AFQT and partly because the military often rejected them for other reasons. It follows, of course, that the sample overrepresents men with 9-16 years of education.[2] **The sample also excludes men who remain in the military as a long-term career.**

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[1] Klassen (1966) describes the CPS weighting procedure in some detail.

These restrictions in the range of veterans' educational attainment are exacerbated by non-response and missing data. Poorly educated and economically unsuccessful veterans were less likely to return the CPS mail questionnaire. This is supposed to be offset by weighting. College educated veterans were overrepresented among those who returned questionnaires, but they often had no AFQT score in their military records. This is not offset by weighting. (College graduates often entered the military via ROTC. Apparently such men did not take the AFQT at the time of induction. The same holds for graduates of the military academies.) The final weighted sample of veterans with questionnaires and test scores is therefore even more educationally homogeneous than veterans in general.

The veterans sample has been analyzed by several previous investigators. After CPS collected the data, they were turned over to NORC for analysis of the factors affecting an individual's chances of seeing military service. Klassen (1966) summarized this work. NORC, in turn, has made the data available to other investigators.[3]

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[2] For detailed comparisons see Klassen (1966).

[3] I am indebted to William Mason for providing me with both the data tape and documentation.

Duncan (1968) used the data on both veterans and non-veterans to estimate a correlation matrix for all 25-34 year olds. He analyzed this matrix using a recursive path model. Griliches and Mason (1972) looked at the effect of controlling parental status and AFQT scores on the estimated rate of return to post-military education. This chapter supplements these earlier analyses in three ways. First, I will compare the veterans sample to other samples that ought to yield comparable results. This should help the reader to assess the generality of conclusions based on veterans. Second, I will present evidence on the extent to which the data conform to the assumptions of Duncan's linear, additive path model. Third, I will investigate the extent to which one can explain the effects of education on economic success by assuming that employers are really paying premium wages to buy generalized cognitive skills of the sort measured by the AFQT.

2. Variables

Table 1 lists the 16 variables used in the analysis. Many are self-explanatory, but a few deserve comment.

Background measures. The NORC data tape included two variables purporting to describe father's occupation. The first was the standard 425 category 1960 Census classification. The second was a unique 32 category classification. This 32 category classification was inconsistent with the 425 category classification for 2.1 percent of all fathers. Another 1.8 percent of all fathers had been assigned to one of the 32 categories but not to one of the 425 categories, while 0.9 percent of all fathers had been assigned to one of the 425 categories but not to one of the 32 categories. The discrepancies appeared to be random. I concluded that respondents' reports of their father's occupation must have been coded twice: once into the 32 broad categories and once into the 425 detailed categories. This level of error, while disconcerting, is probably not unusual for occupational coders. NORC derived the Duncan scores used in my analyses from the 425 category code. Because of an error, I deleted men with missing data on the 32 category variable from the "complete data" sample. I have not used this classification in any other way.

The other background items are Father's Education and dummies for being non-white, for not having an adult male in one's home at the age of 15, for growing up outside the South, and for growing up somewhere other than on a farm. I also experimented with dummy variables for having a white collar father and for having a father in agriculture at 15 but since neither of these added significantly to the predictive power of Father's Occupation, I dropped them. The data did not include a measure of family size. The coding follows the rules outlined in chapter 12 as closely as possible.

AFQT. The Armed Forces Qualification Test was introduced in July, 1950. It was designed primarily to identify men who lacked the cognitive skills expected of an enlisted man. Most items were therefore chosen to discriminate between men at the bottom of the distribution and men in the middle, not between men in the middle and men at the top. But the test was also supposed to provide a rough indication of "mental ability" for those above the minimum, so it also contains some difficult items.

The 1950 version of the AFQT had three 30-item sections, covering vocabulary, arithmetic reasoning, and spatial relations.

In January, 1953, the Defense Department reduced the vocabulary, arithmetic reasoning, and spatial relations sections to 25 items apiece and added another 25 item section on the functions of various tools. The new items on tools were supposed to reduce the dependence of a man's AFQT score on his formal education and increase its value for predicting competence in military jobs. Since no other widely used cognitive test includes items on tools, it is important to ask whether they achieved their purpose.

Bayroff et. al. (1960) investigated the relationship between the four AFQT subtests and educational attainment in a sample of 498 enlisted men. Since the sample excluded both officers and military rejects, the variance of both educational attainment and AFQT is restricted. This attenuated all the correlations. Bayroff et. al. found that education correlated 0.48 with vocabulary, 0.48 with arithmetic reasoning, 0.26 with spatial relations, and 0.11 with tool functions. Education had a multiple correlation of 0.53 with vocabulary and arithmetic reasoning, compared to 0.46 with total score on the entire AFQT. This suggests that including the items on tool functions reduced the correlation between education and AFQT, just as it was supposed to.

Bayroff et. al. also asked each of their subjects' fellow squad members and superiors to rate the subject on a 7-point scale with respect to whether he would make "a good soldier." A man's mean "good soldier" rating correlated 0.38 with his total AFQT score and 0.23 with his education. The standardized coefficient of education with AFQT controlled was only 0.07, indicating that education has little direct effect on ratings. When I used Bayroff et. al.'s data to regress mean "good soldier" rating on the four AFQT subtests, I found that arithmetic reasoning had by far the strongest effect, with tool functions next, and vocabulary a weak third. Spatial relations had no effect whatever. The multiple correlation of "good soldier" ratings with vocabulary and arithmetic reasoning was 0.35, whereas the multiple correlation with these two subtests plus tool functions was 0.39 and the correlation with total AFQT score was 0.38. These findings suggest that adding tool functions to the AFQT not only lowered its correlation with education but raised its correlation with military performance.

Unfortunately one cannot be sure that tool functions predict civilian economic success as well as they predict "good soldier" ratings. Nor could I investigate this question directly using the veterans survey, since the data tape did not include scores on the separate subtests.

I did, however, compare those who entered the military before January 1953 to those who entered later, on the assumption that most of the former had taken the "old" AFQT, which excluded tools, while most of the latter had taken the new version, which included tools. The regressions of Education and Occupation on AFQT did not differ significantly for the two samples. This was surprising in light of Bayroff's results. The regression of Earnings on AFQT was significantly steeper in the older sample, whose AFQT scores did not reflect knowledge of tools. Again, this seemed at odds with the implication of Bayroff et. al.'s work. The difference disappeared when I took account of the fact that the coefficient of AFQT increased with age in both samples, but even after this adjustment there was no indication that the new AFQT predicted economic success better than the old. Perhaps the military values the aptitudes measured by the items on tools more than other employers do. Alternatively, the military may value verbal ability less than other employers do. In any event, I decided to treat the two versions of the AFQT as interchangeable. The reader should bear in mind, however, that results using the "new" AFQT may differ somewhat from results using conventional tests of verbal and quantitative skills.

Bolanovich et. al. (1953) reported that two alternative forms of the "new" AFQT correlated 0.93 with one another when administered under "experimental" conditions (N=500). This implies that the correlation between observed and true scores is $\sqrt{0.93} = 0.964$. But Bayroff et. al. (1960) found that when they administered, scored, and recorded AFQT results under "experimental" conditions, their results correlated only 0.88 with the AFQT score previously obtained and recorded in a man's military files under normal "operational" conditions. After correcting for restriction of range, this became 0.91. This implies that scores obtained under normal operational conditions, as ours were, correlate $0.91/0.964 = 0.944$ with "true" scores. The implied reliability of operational scores on the "new" AFQT is thus $0.944^2 = 0.89$. The estimate has an asymmetric standard error of about ± 0.03.

Unfortunately, the military did not record a veteran's raw score on the AFQT. It recorded only his percentile rank, using quite broad categories of unequal width.[4]

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[4] Table 1 shows the categories.

For simplicity, I wanted to rescale AFQT scores so they would have linear effects on the respondent's Education, Occupation and Earnings. There is , of course, no certainty that any scaling procedure will produce linear effects on all three outcomes, but I decided to start with the assumption that the effects of the abilities measured by the AFQT were all normally distributed. This implied that I should scale the AFQT so that it, too, had a normal distribution. To do this, I first calculated the z-score of each 1.0 percent interval in the normal distribution. I then averaged these z-scores for each of the broad intervals in which the military had recorded men's AFQT scores. This gave me the expected mean z-score of all men in each interval, assuming the underlying scores were normally distributed. I multiplied these means by 15 and added 100 to make the scale comparable to the one used in other analyses in this report. The resulting scores appear in Table 1. As we shall see, this transformation produced reasonably satisfactory results.

Years of Education. Unlike Griliches and Mason, I have not distinguished between education acquired before military service and education acquired afterwards. Such a distinction is tempting, because AFQT scores were recorded at the start of military service. This makes the cause-effect relationship between pre-military schooling and AFQT scores problematic. High initial scores may have led to extra schooling, but extra schooling may also have boosted some men's scores. No such ambiguity arises with post-military schooling. A veteran's AFQT score may affect his chances of returning to school, but such schooling cannot affect his recorded AFQT score. The effect of post-military schooling on earnings with AFQT controlled thus provides a relatively clean estimate of the economic returns to post-military schooling. Such information is clearly useful if one wants to calculate cost-benefit ratios for GI scholarships. It does not, however, prove much about returns to pre-military schooling. Only a third of these veterans returned to school after military service. Such veterans are widely perceived as being different from most other students. They are usually older. They are said to be more vocationally oriented. Many teachers claim they work harder. All this makes it hard to generalize from their experience to the rest of the student population. I therefore chose to combine pre-military and post-military schooling. This means that one cannot use my data to estimate the "bias" in returns to education due to the fact that education correlates with initial ability, since one has no measure of initial ability. One can, however, estimate the extent to which education affects occupational status and earnings independently of ability. This is a matter of considerable importance since if education does not exert its impact on economic success via general cognitive skills, one must ask how else it might do so.

Occupation. Like Father's Occupation, Occupation was apparently coded twice. The coding was inconsistent for 2.0 percent of all cases. Another 0.9 percent were coded as blank on the 3-digit code but not on the 32 category code, while 2.3 percent were coded blank on the 32 category code but not on the 3-digit code.

Earnings. CPS usually solicits income information in March and asks about earnings in the previous year. The veterans survey was conducted in October, so CPS decided to ask about expected earnings for the current year. As a check on the accuracy of the replies, I compared men's answers to this question with their answers to a question about their actual earnings for the week of the survey. The correlation was 0.870. This is comparable to the correlation in the Panel Study of Income Dynamics, which obtained far more detailed retrospective information on hours and weeks worked, weekly earnings, and annual earnings for the year preceding the survey.

The correlations between worker characteristics and Annual Earnings were 0.01 to 0.03 lower than the correlations between these same characteristics and Weekly Earnings. This suggests that worker characteristics predict weekly earnings better than they predict weeks worked per year. I therefore considered using Weekly Earnings as a dependent variable. Unfortunately, only 82 percent of the sample reported Weekly Earnings, whereas 98 percent reported Annual Earnings. Those who reported Weekly Earnings had much higher Annual Earnings than those who did not report Weekly Earnings ($7163 vs $4202). They also had more uniform Annual Earnings (S.D. = $2932 vs $3684). I therefore decided to ignore the data on Weekly Earnings in subsequent analyses.5/

5/ Griliches and Mason's analysis of this survey differs from mine in this respect.

3. Univariate Statistics: Comparisons with OCG

Table 2 shows the means and standard deviations of the basic variables for veterans and for 3,166 OCG men aged 25-34 with complete data. The veterans sample includes fewer blacks than OCG. It also seems to include fewer men with poorly educated fathers, though this may simply be a by-product of coding differences. The veterans sample underrepresents men whose fathers had very high or very low status occupations.

It is not easy to say how the AFQT distribution compares to national norms. AFQT scores were recorded in percentiles that supposedly correspond to percentiles of the mobilized population in 1944, so veterans scoring 100 should be at the mean for mobilized men in 1944. This would put them slightly above the national mean for all men in 1944. But the mean has almost certainly risen since 1944 (Karpinos, 1975). The mean for all men eligible for induction in 1958-62 was about 98 in the present metric. The mean for 1950-57 was probably slightly lower. The standard deviation for the mobilized population in 1944 should be 15, which implies a standard deviation of 16 or more for all men. I have not tried to determine the trend in this value, if any. Subsequent discussions assume the population value is 15, but this may be too low.

Veterans have 0.3 years more education than the OCG 25-34 year olds. The standard deviation of Years of Education is severely restricted, both because poorly educated men were often rejected and because well educated men were often deferred or had no AFQT score in their military records. Veterans' occupational status is no higher than the OCG average for 25-34 year olds. The variance of Occupation is restricted, but no more than we would expect given the restricted range of Years of Education.[6]

Veterans' expected 1964 earnings exceeded OCG men's 1961 income by 19.6 percent. Census data indicate that the use of income rather than earnings increases the OCG mean by 0.8 percent, so the true gap is 20.4 percent.[7]

Mean income of 25-34 year olds rose 13 percent between 1961 and 1964.[8]

So the unexplained gap is about (1.20 - 1.13)/1.13 = 6.2 percent.

Part of this difference may be due to inaccuracies in the means assigned to grouped responses. Part of it may be due to real differences between veterans and non-veterans. The variance of veterans' earnings is also quite restricted, especially if one

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[6] Years of Education explains $0.649^2 = 42.1$ percent of the variance in Occupation among OCG 25-34 year olds. The variance in Years of Education among veterans is $1 - (2.47/3.31)^2 = 44.3$ percent less than the OCG variance. The expected variance in veterans occupations is therefore $(0.421)(0.443) = 18.7$ percent less than in OCG. The observed variance among veterans is $(25.61^2 - 22.94^2)/25.61^2 = 19.8$ percent less than OCG.

[7] Including men with zero earnings but positive income lowers the mean by two percent. Including unearned income raises it by three percent in this age group.

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[8] U.S. Bureau of the Census, 1974, p. 17.

allows for the fact that the mean is higher for veterans than for OCG men. This restriction is at least partly due to the fact that the veterans survey grouped all incomes over $15,000, whereas OCG separated men with $15-25,000 from men with over $25,000. But even after correcting for this, the coefficient of variation is 0.59 for OCG compared to 0.46 for veterans. The pattern for Ln Earnings is similar. The discrepancy is largely due to the fact that more 25-34 year olds reported very low incomes in OCG than reported very low earnings in the veterans survey. Some of the low income OCG men were probably students. Others may have been men who did not work but received some income from **other sources.**

4. Bivariate Relationships

Table 2A compares correlations for veterans to correlations for OCG 25-34 year olds with complete data. The veterans' correlations are lower than the OCG correlations in almost every instance. The downward bias is largely explicable in terms of sample restrictions.

This means that one cannot generalize from veterans to other 25-34 year old males without correcting for restriction of range in the veterans sample. Since these restrictions have been exerted on both AFQT and education simultaneously, the adjustment is seldom simple. In what follows, I will examine the effect of these restrictions on the relationship between AFQT scores and other traits. I will not discuss other bivariate relationships unless they seem relevant to making inferences about AFQT scores.

Father's Education

Table 3A shows the relationship of veterans' characteristics to their father's education. Father's Education explains only 5.1 percent of the variance in AFQT scores. This is less than for the Project Talent Academic Composite (9.8 percent), the Kalamazoo IQ test (7.8 percent), or the PSID sentence completion test (6.1 percent). These discrepancies may be partly due to differences between the tests. In addition, veterans are explicitly selected on AFQT scores. (This is also somewhat true for the Talent sample, which explicitly selected on educational attainment and hence implicitly on test scores.) Eliminating men with low scores produces an upward bias in mean AFQT at all levels of Father's Education. The bias is most severe for men with poorly educated fathers, since more of these men are likely to have had scores below the military's cutoff point. As a result, data on veterans will underestimate the effect of Father's Education on AFQT in the larger population. This will hold true regardless of whether one looks at the correlation or the unstandardized regression coefficient.

The standard deviation of AFQT score is slightly higher for sons of highly educated fathers than for sons of poorly educated fathers. This is probably a by-product of the fact that men with

AFQT scores below the 10th percentile have almost all been eliminated from the sample.

I also ran regressions (not shown here) of AFQT, Years of Education, Occupation, Earnings, Ln Earnings, and Earnings$^{1/3}$ on Father's Education, Father's Education^2, and No Male at Home. These regressions covered only men with complete data. Three conclusions emerged.

(1) The value of R^2 using a simple linear equation was always within 0.01 of eta^2.

(2) The coefficient of Father's Education^2 was consistently insignificant for all dependent variables.

(3) The effect of No Male at Home was consistently negative but seldom significant.

On the basis of these regressions I decided to ignore the non-linear effects of Father's Education in subsequent analyses, but to retain No Male at Home.

Father's Occupation

Table 4A shows that Father's Occupation explains 6.6 percent of the variance in AFQT scores, compared to 12.2 percent for the Talent Academic composite, 6.7 percent for Kalamazoo IQ scores, and 5.8 percent for PSID sentence completion scores. **The PSID comparison is complicated by the fact that the PSID used a** less reliable test. **The other discrepancies can probably be explained in the same way as those involving Father's Education.**

Table 4A also confirms Jackson's finding in Appendix B that Duncan's method of scaling Father's Occupation does not yield a scale with linear effects. A ten point difference between two fathers' Duncan scores has slightly more impact on their sons if the fathers are near the bottom of the Duncan scale than if they are near the top.

But instead of following a clean curvilinear pattern, the deviations from linearity in Table 4A are quite erratic.

While the values of R^2 from the linear regressions were significantly lower than eta^2, the coefficient of Father's $Occupation^2$ was almost never significant when I added it to the linear regression. Since the discrepancy between R^2 and eta^2 was never more than 0.02, and since the non-linearities had no clear interpretation, I decided to ignore them in subsequent analyses.

Once again, AFQT shows slightly more variance among high status sons than among low status sons. Just as with father's education, this may be a by-product of the artificial floor on AFQT scores imposed by military selection policies.

Race

Table 6 shows respondents' characteristics broken down by race. Non-white veterans score 10 points lower than white veterans on the AFQT. This difference would be larger were it not for the fact that military selection procedures eliminate low-scoring men, many of whom are non-white. Karpinos (1966) and Cutright (1973) show, for example, that when Selective Service tested representative samples for possible induction, the difference between whites and non-whites **were 50-100 percent greater than in the present sample.**

Military selection procedures make non-white veterans more like whites in other respects as well. While 25-34 year old whites got 2.3 years more education than non-whites in OCG, the difference is only 0.1 years among veterans. (The GI bill may have had **some effect here.**) White 25-34 year olds in OCG worked in occupations that ranked 23 points above the non-white mean. The gap is only 8 points among veterans. Non-white 25-34 year olds earned 50 percent of the white mean in OCG. Non-white veterans earned 69 percent of the white mean. All in all, this sample of non-white veterans seems so unrepresentative of the non-white population aged 25-34 that **I do not think any strong conclusions should** be drawn from it.

Age

Table 7A contrasts 25-29 year old veterans with 30-34 year old veterans. Older veterans have lower test scores, the same educational attainment, higher occupational status, and higher earnings. Older veterans are also more variable on all these measures. Frequency distributions (not shown here) indicate that almost all veterans with scores below the 10th percentile were 30-34 rather than 25-29.

Likewise, most of the veterans who had not **entered** high school or who had completed college were aged 30-34 rather than 25-29. These differences are presumably due to changes in military selection procedures. The 30-34 year olds were eligible for induction during the Korean War, when draft calls were high, standards of fitness low, and educational deferments scarce. The 25-29 year olds reached the age of 18 between 1953 and 1957, when draft calls were lower, fitness standards higher, and educational deferments easier to get. As a result, 25-29 year old veterans are probably less representative of their age cohort than the 30-34 year old veterans. I will return to this issue later.

AFQT Scores

Table 8A shows the mean and standard deviation of Education, Occupation, and the three earnings measures for veterans with different AFQT scores. The reader should remember that the AFQT intervals vary in width, so the expected increment in the dependent variable varies from line to line in Table 8A. Remember, too, that men who scored below the 10th percentile were usually rejected for military service. Men who were accepted for service despite **such** a low score probably differed from the rejects in important ways. In any event, there are too few veterans with scores below the 10th percentile to yield reliable estimates of their other traits. Above the 10th percentile, each increase in AFQT scores is associated with an increase in educational attainment, occupational status, and earnings.

Table 8B shows the regressions of Education, Occupation, and Earnings on AFQT and AFQT^2 for veterans with complete data on all variables. Since Table 8B **excludes** men with incomplete data, the sample is not strictly comparable to that covered by Table 8A. Still, the linear regression equations explain almost as much variance as the eight AFQT categories. $AFQT^2$ is significant only in the equation predicting Years of Education, where it has a negative coefficient. This is precisely the sort of non-linearity one would expect if the "true" effect of test scores on Years of Education were linear but college graduates were systematically undersampled, as they are here. It is also the sort of non-linearity one would expect if either (a) high schools selected on academic aptitude more severely than colleges, of (b) high schools taught the skills measured on the AFQT more successfully than colleges. Neither possibility strikes me as very likely.

As noted above, I scaled AFQT scores on the assumption that **its effects were normally distributed.** Table 8B implies that after normalization a one point difference in AFQT score has roughly the same impact regardless of where it arises on the AFQT scale. This suggests, though it certainly does not suffice to prove, that a normalized test score has the properties of an interval scale, at least for purposes of stratification research. The evidence is obviously not conclusive. We do not know whether the effects of a normalized test score remain linear for men with scores below the 13th percentile or above the 95th percentile. Even within this range, the effects of AFQT are **only approximately linear** in the present sample. While the deviations from linearity are not statistically significant except for Education, that does not suffice to prove **the true relation is linear.**

As mean AFQT increases, the standard deviation of occupational status also increases. This is what we would expect if Duncan's method of scaling occupational status exaggerated the distance between high status occupations relative to the distance between low status occupations.

The coefficient of variation does not change in any consistent way with AFQT. This suggests that earnings are about as unequal among men with high scores as among men with low scores. Yet the standard deviation of Ln Earnings is higher for men between the 10th and 20th percentiles than for men who score above the 20th percentile. This is because so many men between the 10th and 20th percentiles expect very low earnings. 17 percent of all veterans with scores below the 20th percentile expected to earn less than $3000 in 1964. Six percent of veterans above the 21st percentile expected to earn less than $3000. This percentage did not decline as AFQT scores rose from the 21st to the 93rd percentile. Given the small number of men at each AFQT level, these figures should be treated cautiously. Still, they suggest that if one is interested in the fraction of a group that will escape poverty, the effects of normalized AFQT scores may not be perfectly linear.

Veterans had had different amounts of education when they took the AFQT. Since education may affect the cognitive skills measured by the AFQT, the regression of Years of Education on AFQT over-estimates the extent to which these cognitive skills affect educational attainment.[9]

Since the Talent and Kalamazoo tests were given to men with the same amount of schooling, one might expect them to have a weaker relationship to Education than the AFQT does. The PSID sentence completion test was given to men with different amounts of schooling, so it should yield results similar to the AFQT. But this comparison is complicated by the fact that the PSID sentence completion test is far less reliable than the other three tests. In addition, the education distributions have been artificially truncated in the veterans sample and in Talent. Thus it comes as no great surprise to find that eta^2 is 0.264 for Veterans, 0.287 for Talent, 0.260 for Kalamazoo, and 0.203 for PSID. The regression coefficient of test scores is 0.091 for Veterans, 0.094 for Talent, 0.103 for Kalamazoo, and 0.105 for the PSID.[10]

The differences among the regression coefficients are not statistically significant. This does not necessarily mean that Education has no effect on AFQT or on this PSID test. Rather, it probably means that the upward bias imparted by testing men with different amounts of education is offset by other downward biases. In the veterans sample this downward bias comes from underrepresentation of men with extreme values on Education, and perhaps also from the inclusion of tool functions in the test given to younger men. In the PSID, it comes from using an unreliable test.

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[9] Perhaps the best evidence on this point comes from Fagerlind's (1975) data on men who were in 3rd grade in Malmo, Sweden in 1938. Education correlated 0.403 with 3rd grade IQ, compared to 0.576 with military test score ten years later. Using the latter as a proxy for the former would therefore bias the coefficient upward by (0.576/0.403) - 1 = 43 percent. The bias would probably be lower, however, if one compared military tests to an IQ test given at the minimum legal age for school leaving. For further evidence see Jencks et. al. (1972, pp 87-89) and the sources cited there, which imply somewhat less bias in the U.S.

[10] I transformed the PSID sentence completion test to a standard deviation of 15 for purposes of this and subsequent comparisons.

Since AFQT incorporates some of the effects of differential schooling along with the effects of early aptitude/achievement, I also expected its effect on Occupation to be larger than in samples whose respondents had all had the same amount of schooling when they took the test.[11]

In fact, a one point increase in AFQT is associated with an 0.62 point increase in veterans' occupational status, compared to 0.77 points in Talent, 0.69 points in Kalamazoo, and 0.50 points in the PSID. The PSID results are not really comparable to the others, since the occupational metric is somewhat different and the test less reliable. The coefficient for veterans is, however, lower than for the coefficient for the Talent and Kalamazoo samples, which were tested prior to school completion.

One reason the coefficient is lower for veterans is probably that the veterans sample includes far fewer college graduates than the Talent and Kalamazoo samples. Test scores exert much of their influence on a man's occupational status by affecting his educational attainment, and an extra year of college or graduate school exerts far more influence on occupational status than an extra year of elementary or secondary school. Since the veterans' sample underrepresents college graduates, it undersamples the very men whose test scores have most affected their occupational status.

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[11] In Fagerlind's Malmo sample, occupational status at the age of 41 correlated 0.352 with 3rd grade IQ compared to 0.529 with military test score. This means that substituting military scores for 3rd grade scores would inflate the bivariate regression coefficient by 50 percent. The upward bias would probably be less if one substituted military test scores for scores obtained from 6th or 11th graders.

A one point increase in AFQT is associated with a 1.0 percent increase in 25-34 year old veterans' earnings, an 0.6 percent increase in Talent 28 year olds' earnings, and a 1.1 percent increase in Kalamazoo 35-59 years olds' earnings. The discrepancy between Talent and Kalamazoo suggests that the effect of test scores increases with age. To reduce this source of discrepancy I separated veterans aged 25-29 from veterans aged 30-34. A one point increase in AFQT was associated with an 0.6 percent increase in earnings among 25-29 year old veterans, which is identical to the value for Talent 28 year olds. A one point increase was associated with a 1.2 percent increase in earnings among 30-34 year old veterans, which is consistent with the results for Kalamazoo men. This suggests that the effects of AFQT scores increase with age.12/

As a final check on the representativeness of the veterans sample, I compared it to Cutright's (1973) sample of 5,972 white men born between 1927 and 1934 who were registered with the Selective Service System in 1953. Cutright obtained information on race, AFQT score, and education from Selective Service records. His measure of educational attainment is usually the highest

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12/ Sewell and Hauser (1975), Taubman and Wales (1974), Cutright (1973), and Fagerlind (1975) all report the same pattern. In Fagerlind's data, 3rd grade IQ correlates 0.220 with Ln Earnings at 28 vs. 0.396 with Ln Earnings at 41. Military scores correlate 0.219 with Ln Earnings at 28 vs. 0.504 with Ln Earnings at 41.

grade a man had completed when he registered for service at the age of 18. (Some boards updated this information later, but this was far from universal.) The meaning of such an educational measure is ambiguous, since variations in educational attainment at the time of registration reflect both variations in the rate at which an individual has moved through elementary and secondary school and variations in the number of years of education he eventually completed. Like Sewell, Cutright obtained an estimate of each man's 1964 earnings from the Social Security Administration. His men's earnings are appreciably less equal than mine.

Cutright's sample was aged 30-37 in 1964, so I compared it to the 803 veterans aged 30-34 in 1964 who had complete data. Table 8C shows means, standard deviations, and correlations for the two samples. As expected, mean educational attainment appears much lower in Cutright's sample than among veterans. The standard deviations are about equally restricted, though for different reasons. But the correlation between AFQT and education is much higher in Cutright's sample than in mine. Perhaps a man's AFQT score is more closely related to the pace at which he moves through elementary and secondary school than to the amount of education he eventually gets. More likely, however, the difference is due to the underrepresentation of men with extreme values on AFQT and Education in the veterans' sample.

While Cutright's education measure shows a stronger correlation than mine with AFQT score, his earnings measure has a lower correlation with AFQT than mine does. But his earnings measure has a larger standard deviation, so the bivariate regression coefficients are about the same. A one point increase in AFQT is associated with an $86 increase in earnings for Cutright's sample, compared to $83 in my sample. These results suggest that the larger standard deviation of earnings in Cutright's data may be due to random errors in the Social Security Administration's estimates of earnings for men who earned more than the maximum amount subject to Social Security taxes.

The foregoing comparisons with the Talent, Kalamazoo, and Cutright samples lead me to three conclusions about the data on veterans AFQT scores.

(1) The observed correlation between veterans' AFQT scores and most other traits underestimates the true correlation in representative national samples. Correlations drawn from the veterans sample should not be extrapolated to other contexts without adjusting both for restrictions in the range of AFQT and for undersampling of men with very high and very low levels of educational attainment.

(2) The unstandardized bivariate regression coefficient of AFQT in equations predicting veterans' educational attainment, occupational status, and earnings is quite similar to the coefficient obtained in other samples. This means that while the coefficient for veterans is biased downward by underrepresentation of men with extreme values on Years of Education, this bias is offset by the fact that the AFQT is administered to men who have had different amounts of schooling.

(3) The relationship between AFQT score and Earnings increases substantially up to the age of 30, This means that results for men under 30 cannot be extrapolated to older samples.

Education

Table 9A shows the mean and standard deviation of AFQT, occupational status, and earnings for veterans with different amounts of education. The standard deviation of AFQT score is severely restricted for men with low educational attainment, presumably because the sample excludes almost all men who scored below the 10th percentile.
Education explains less of the variation in occupational status and earnings among veterans than among OCG 25-34 year olds (see also Table 2A.

In Table 9B, the Occupation equations show that a one year increase in Education is associated with a 5.1 point increase in veterans' occupational status, compared to 5.2 points for OCG 25-34 year olds. The Ln Earnings equations show that an extra year of education raises veterans earnings about 5.6 percent, compared to 7.4 percent for OCG men 25-34. The OCG and veterans coefficients differ significantly for Ln Earnings, probably because of the restriction of range in Ln Earnings for veterans. As noted above, this restriction appears to derive from a combination of broader reporting categories in the veterans survey and the dearth of veterans with low earnings. The same problem arises when one compares the regressions of Annual Earnings on Education for veterans and OCG respondents. I conclude that data on veterans somewhat understate the effect of education on both Annual Earnings and Ln Earnings.

Table 9B also shows regression equations that allow for non-linear relationships between education and economic success. Higher education has substantially more impact than secondary education on occupational status, but this is not true for Ln Earnings. This pattern is consistent with OCG and Census data on 25-34 year olds.

Experience

Table 10 shows the effect of work experience on occupational status and earnings. Because the veterans are selected on age, there is a strong negative correlation between education and experience. I therefore controlled the education measures before adding the experience measures.

Equation 1 is similar to Equation 2 in Table 9B except that it includes Work Experience. Contrary to what Bartlett and I found with Census 25-34 year olds, the effects of Work Experience are essentially linear in this sample. (Experience^2 has the "wrong" sign, and is consistently insignificant.) This presumably reflects the changes in military selection procedures after the Korean War, discussed above. These changes produce different amounts of sample bias for veterans born in different years. This means that the apparent effect (or lack of effect) of Experience in this sample cannot be generalized to other samples.

Veterans Aged 30-34

The foregoing comparisons raise serious doubts about the possibility of generalizing from 25-34 year old veterans to other 25-34 year olds. The age breakdowns in Table 6 suggested, however, that this might not be such a serious problem if one looked only at veterans over 30. Table 11 compares the means, standard deviations, and correlations for 30-34 year old veterans to those for OCG 30-34 year olds. There are still disturbing discrepancies, but they are less serious than before. The standard deviation of Years of Education, for example, is 82 percent of the OCG standard deviation instead of 75 percent. The standard deviation of AFQT is 95 percent of the estimated population value instead of 91 percent. The correlations of background characteristics with AFQT are all higher than for 25-29 year olds, as are the correlations of AFQT with Education, Occupation, and Earnings. The correlations of background characteristics with Education are no higher than for 25-29 year olds, however, and no closer to the OCG values. The correlations of Education with Occupation and Earnings are higher than for 25-29 year olds but still no closer to the OCG values. Thus while the 30-34 year old veterans are more presentative of the cohort from which they are drawn than the 25-29 year old veterans, they must still be viewed with considerable scepticism. Still, results for 30-34 year old veterans should generalize to representative samples of older men somewhat better than results for 25-29 year old veterans. Furthermore, since almost all the respondents over 30 entered the military before 1953, they almost all took the "old" AFQT, which did not include the items on tools. This makes the AFQT more nearly comparable to other standard cognitive tests. I therefore decided to restrict my multivariate analyses to 30-34 year olds.

5. Multivariate Relationships for Veterans With Complete Data: Determinants of AFQT Score

Table 12A shows the regression of AFQT scores on the six major background characteristics covered by the veterans survey. Since the bivariate relationships differ from other samples, the same is inevitably true for the multivariate equations. I will therefore forego detailed comparisons.

Equation 1 estimates the linear, additive effects of all the measured background characteristics simultaneously. All the background characteristics that had significant bivariate relationships with AFQT still have significant effects with other background characteristics controlled. The only insignificant coefficient is for No Male At Home, which was also insignificant at the bivariate level.

I also tested each of the ten multiplicative interactions between the significant background characteristics in equation 1. Three had coefficients more than twice their standard errors. They are shown in equation 2. These terms have not been made orthogonal to their additive components so the coefficients of the additive terms and the betas in equation 2 should be interpreted cautiously.

Equation 3 includes Years of Education. If you assume that Education can affect AFQT score but not vice versa, the coefficient of Education in equation 3 represents its "true" effect on AFQT, net of background characteristics. The coefficients of the background characteristics represent their "direct" effects, over and above their effects via education. This interpretation strikes me as far-fetched, however. I interpret equation 3 merely as showing how AFQT scores vary among men with the same amount of education. It indicates, for example, that if one takes a sample with the same amount of schooling and the same father's education and occupational status, non-whites will still score lower than whites, Southerners lower than Northerners, and men raised on farms lower than men raised elsewhere. But Father's Occupation has no independent relationship to AFQT if the respondent's own education is held constant.

Equation 4 confirms that it is not important to allow for the non-linear relationship between Education and AFQT in this sample.

Determinants of Educational Attainment

Table 13A shows the regression of Years of Education on veterans' other characteristics. Equation 1 shows that all the background characteristics have significant effects on Years of Education, though they do not explain as much variance as in more representative samples like OCG. Equation 3 shows that controlling AFQT sharply reduces the coefficients of most background characteristics. If you assume that AFQT score is a reasonably satisfactory proxy for test scores prior to school completion, the coefficient of AFQT in equation 3 estimates the "true" effects of such scores, after background characteristics have been controlled. Conversely, the coefficients of the background characteristics represent the "direct" effects of these characteristics, over and above their effects via AFQT. The coefficient of Non-South, for example, is 0.68 in equation 1, compared to 0.06 in equation 4, which controls both AFQT and AFQT^2.

This means that if we compare Southerners to Northerners with the same AFQT score, the Northerners' educational advantage falls by (0.68 - 0.06/0.68 = 91 percent. Thus we can say that 91 percent of the educational handicap associated with Southerners' upbringing is due to the fact that such upbringing lowers a man's test performance. If you assume that AFQT scores are significantly affected by education, equation 3 provides no readily interpretable information.

Occupational Status

Table 14A shows the regression of 30-34 year old veterans' 1964 occupational statuses on their other characteristics. Equation 1 shows that background characteristics explain only 13 percent of the variance in these men's occupational status, compared to 27 percent for OCG 30-34 year olds. This suggests that one should not generalize from veterans to other groups regarding the effect of background on occupational status.

Equation 3 estimates the effect of education on occupational status with family background controlled. The education coefficients for veterans are slightly smaller than for OCG 30 -34 year olds, but the differences are not statistically significant. Equation 4 controls AFQT scores. The education coefficients in equation 4 therefore estimate the impact of education among men with the same AFQT score. (Controlling AFQT reduces the coefficient of Education by about 40 percent. This means that about 40 percent of the occupational advantage conferred by additional secondary education derives either from the fact that secondary schools select on the cognitive skills measured by the AFQT or from the fact that they teach these skills. But 60 percent of the effect of secondary education on occupational status derives neither from the fact that secondary schools teach generalized cognitive skills nor from the fact that they select on these skills. The picture for higher education is even clearer. Higher education confers a much larger occupational advantage than secondary education, and virtually none of this advantage is dependent on either teaching or selecting on general cognitive skills. College graduates occupations typically rank 30 points above high school graduates. Even if they have the same AFQT scores, college graduates outrank high school graduates by 28 points. This may mean that colleges teach or select on skills other than those measured by the AFQT. Or it may mean that high status occupations demand credentials per se.

I also looked for interactions between AFQT scores and other traits in determining occupational status. First, I added the multiplicative interactions of AFQT with Father's Education and Father's Occupation to equation 2. Both were positive. Neither was twice its standard error, but the t value for the interaction of AFQT with Father's Occupation was 1.88. I therefore ran three separate regressions for men with white collar fathers, blue collar fathers, and farm fathers. This procedure is not quite the same as allowing for multiplicative interactions between Father's Occupation and AFQT, since Father's Occupation is a Duncan score, not a simple trichotemy. Running separate regressions also allows the coefficients of all traits to vary across subsamples simultaneously. The results appear in Table 14D. The coefficient of AFQT is significantly higher (t = 2.16) for men with white collar fathers than for men with blue collar fathers. The coefficient for men with blue collar fathers is, in turn, double that for men with farm fathers, but the difference is not significant (t = 1.60). Taken at face value, these results imply that AFQT affects a man's occupational prospects more if he comes from an already advantaged home. I am not inclined to put too much weight on this conclusion, however, since it is not supported by the Talent or Kalamazoo results. The largest t-statistic for differences in coefficients between samples from different backgrounds in my sample is 3.04, and values of this size are bound to occur occasionally by chance, especially in weighted samples. The fact that there is no similar interaction between AFQT and Father's Education also raises serious doubts in my mind about the generality of the pattern.

Next, I tried adding the multiplicative interaction between AFQT and Years of Education to Equation 3 of table 14. It had a negative sign and was only 1.1 times its standard error. As a further check, I ran separate regressions for men with AFQT scores below the 31st percentile, between the 31st and 64th percentiles, and above the 64th percentile. These regressions appear in Table 14E. The most striking difference is not in the coefficients of the education measures but in the coefficient of White. Other things being equal, whites and non-whites who scored below the 64th percentile on the AFQT ended up with almost the same occupational statuses. But non-whites who scored above the 64th percentile ended up in occupations that ranked 28 points below their white counterparts. This suggests that white employers in 1964 assumed all non-whites were cognitively inept, regardless of their actual test scores. Nonetheless, the evidence is hardly conclusive. While the difference in coefficients is clearly significant in a statistical sense, the fact remains that only six non-whites in this sample scored above the 64th percentile. Furthermore, the non-white veterans who scored below the 64th percentile were probably not representative of all non-whites with such scores.

The coefficients of the education variables do not differ significantly for men with different AFQT scores. This is partly because the non-linear education measures are highly collinear with one another and therefore have large standard errors. When I eliminated the non-linear terms, the coefficient of Years of Education was significantly lower for veterans scoring below the 31st percentile than for veterans scoring above the 31st percentile. The difference derives from the fact that most of the variation in educational attainment among men who score below the 31st percentile is at the secondary level, whereas most of the variation among men above the 31st percentile is at the college level. Since high school has less effect on occupational status than college does, regardless of one's AFQT score, the coefficient of Years of Education is lower. Since this difference became insignificant once I allowed for differences between secondary and higher education, the most parsimonious interpretation is that the apparent interaction between AFQT and educational attainment is due to non-linearities in the effect of educational attainment. This interpretation is reinforced by comparing regression equations (not shown here) for veterans who did not finish high school, who just finished high school, and who attended college. The coefficient of AFQT hardly varies in these three equations.

I draw three conclusions about the relationship between AFQT score and occupational status.

(1) Data on veterans cannot provide precise estimates of the impact of test scores prior to school completion on occupational status. The veterans data do show, however, that the relationship between adult test scores and occupational status depends on the fact that adult test scores are related to educational attainment.

Among men at any given educational level, adult scores have relatively modest effects on occupational status.

(2) Test scores may have more impact on occupational status if one comes from an advantaged family than if one comes from a disadvantaged family. But while the difference is significant for veterans, it does not appear in the Talent or Kalamazoo samples, so its generality remains uncertain.

(3) While a man's chances of completing any given year of school depend on his test scores, the occupational benefits of completing any given year of schooling are no greater for men with high scores than for men with low scores.

Determinants of Ln Earnings

Table 16A shows the regression equations for Ln Earnings for 30-34 year old veterans. Measured family background characteristics explain 12.4 percent of the variance in Ln Earnings, compared to 17.9 percent for Ln Income among OCG 30-34 year olds. Equation 2 shows that with only experience controlled, each extra year of education raises earnings by about 9.6 percent. This is comparable to the results for other samples. Note that since experience has linear effects on 30-34 year old veterans' earnings, and since each extra year of education means a year less experience, the net effect of an extra year of education (with age controlled) is simply the difference between the education coefficient and the experience coefficient, i.e., 0.09642 - 0.03934 = 0.05708. Equation 3 shows that controlling family background reduces the estimated gross effect of education from 0.096 to 0.077 and reduces the net effect from 0.057 to 0.043. Equation 4 shows that test scores account for 1 - (0.05572/0.07650)= 27 percent of the gross effect of education, and 1 - (0.05572 - 0.03014)/(0.07650 - 0.03323) = 41 percent of the net effect. Equation 5 shows that for men who have not only the same AFQT score but the same amount of experience and the same occupation, an extra year of education increases earnings by 3.1 percent. If we allow for the fact that extra education lowers experience, the *net* effect of a year of education is only an 0.4 percent increase in earnings. This is not significantly different from zero. For veterans in this age bracket, then, virtually the entire net impact of education on earnings can be explained in terms of the fact that (a) highly educated men come from advantaged family backgrounds, (b) highly educated men have high test scores (either because of selection or because schooling actually raises test scores), and (c) highly educated men enter high status occupations. Among veterans with the same family background, the same test scores, the same occupation, and the same age, education has essentially no relationship to earnings. The fact that education still has a significant coefficient once we control experience suggests, however, that if veterans with additional education work as long as veterans with less education (i.e., if they retire later), they will end up with higher lifetime earnings.

I also ran the regressions similar to those in Table 16A that included non-linear terms for Years of Higher Education and College Graduation. These terms were consistently insignificant in all the regressions, so I have not presented the results here.

I then investigated whether the effects of AFQT on earnings depended on a worker's other characteristics. The multiplicative interaction terms involving Father's Education x AFQT and Father's Occupation x AFQT both had negative signs when I added them to equation 2, but neither coefficient was close to twice its standard error. When I reran equation 2 for men whose fathers engaged in different types of work, the coefficients of AFQT did not differ significantly. Nor is there any such interaction in the Talent or Kalamazoo samples. I conclude that there is no convincing evidence of interaction between parental status and test scores in determining Ln Earnings.

The multiplicative interaction between AFQT and Years of Education had a negative sign when I added it to equation 4, but the coefficient was far less than its standard error. The coefficient of AFQT did not vary significantly when I reran equation 4 for men who did not finish high school, who finished high school but did not enter college, and who entered college.

Finally, I explored the question of whether the effects of AFQT score change with Age or Experience in this sample We have already seen that the effect of AFQT is larger for 30-34 year olds than for

25-29 year olds. Within the 30-34 year old sample, both AFQT x Age and AFQT x Experience had positive coefficients, implying that the coefficient of AFQT has not yet peaked. But neither interaction was as large as its standard error. This suggests that the coefficient of AFQT does not increase as fast after 30 as before, and that the slight apparent increase may simply be due to sampling error.

Determinants of Annual Earnings

Table 15A shows a series of regression equations similar to those in Table 16A except that they predict Annual Earnings instead of Earnings. The results do not differ in any important respect from the results for Ln Earnings.

Determinants of Job Satisfaction

Returning to the correlations in Tables 2A and 11, one can easily see that the background characteristics measured in this survey have negligible effects on reports of Job Satisfaction. Whites are slightly more satisfied than non-whites, and men with high status fathers are slightly more satisfied than men with low status fathers, but the differences are not large enough to justify systematic analysis.

AFQT and Years of Education also have negligible zero-order correlations with Job Satisfaction. Indeed, Earnings is the only variable that has an appreciable correlation with reported Job Satisfaction. This relationship is non-linear, with men who earned less than $3000 far less satisfied than others. As a result, Ln Earnings predicts Job Satisfaction slightly better than Earnings.

When I ran a multiple regression of Job Satisfaction on all the background variables, AFOT, Education, Experience, Occupacion and Ln Earnings onlv two had statistically significant effects. Ln Earnings had a positive coefficient (beta = 0.229), and AFQT had a negative coefficient (beta = -0.152). The significant negative coefficient of AFQT is intriguing. It suggests that men with high AFQT scores expect more of their jobs than men with low scores. They also seem to get more in most cases, so they end up about as satisfied as other people. Hence the low zero-order correlation. But if they don't get more, i.e., if their occupational status and earnings are only average, their Job Satisfaction falls appreciably below average. Hence the negative coefficient of AFQT with Occupation and Earnings controlled. Education, in contrast, does not seem to have this kind of effect. Once AFQT scores are controlled, education has no significant effect one way or the other. (Non-linear regressions suggest that college dropouts are less satisfied than average and college graduates are more so, but the differences are not significant in this sample.)

Summary

The veterans sample is not representative of the general population. It underestimates the effect of background characteristics on all outcomes, and it also underestimates the effects of AFQT and education. These biases are more serious for veterans under 30 than for veterans over 30.

The sample does, however, provide some useful evidence on the relationship between AFQT scores and economic success. This evidence is consistent with that from Project Talent, from Kalamazoo, and from Cutright's Selective Service System sample. Reconciling results from these different samples depends, however, on recognizing that the effects of test scores, like the effects of education, increase with age/experience.

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Table 0

		Number of Men
1.	Men 25-34	5442 [a]
2.	Veterans 25-34	2966 [b]
3.	Veterans 25-34 returning questionnaires	2627
4.	Veterans 25-34 returning questionnaires for whom Defense Dept. found AFQT scores.	2014 [c]
5.	Veterans 25-34 with questionnaires and AFQT scores and not enrolled in school.	1831 [d]
6.	Veterans 25-34 with questionnaires and AFQT scores, not in school, and expecting some earnings in 1964	1815
7.	Veterans 24-34 with questionnaires and AFQT scores, not in school, expecting some earnings, and with complete data on items in Table 1.	1438

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[a] This figure is approximate. The unweighted sample of 16-34 year olds included 11,675 men. Klassen (1966:123) reports that 25-34 year olds constituted 46.6 percent of the weighted CPS sample. I do not know the proportion of 25-34 year olds in the unweighted sample, but it should not differ dramatically from the proportion in the weighted sample.

[b] This figure is also approximate. Rivera (1965) reports that the unweighted sample included 3,568 men who described themselves as veterans or were so described by the member of their household interviewed by CPS. Klassen (1966) shows that after weighting, 83.1 percent of all veterans aged 16-34 were between 25 and 34. I do not know the unweighted percentage, but once again it should be close to the weighted one.

[c] The Defense Department located scores on military tests other than the AFQT for 202 additional veterans. These men were mostly over 30. They did not seem to differ in any obvious respect from other veterans over 30. I excluded them in order to reduce ambiguity about the content of the test used to predict cognitive skill.

[d] I excluded men who were enrolled in school either part time or full time.

TABLE 1

Selected Questions, Coding, and Percentage Distribution of Valid Responses From 1964 Veterans Survey: 1815 Veterans Aged 25-34, Not in School, With AFQT Scores and Earnings.

Variable	CPS Question	Response Categories	Coding	Percentage Distribution of Valid Responses
Respondent White	Judgment made by CPS interviewer	White	1	93.5
		Non-White	0	6.5
		Missing: N=10	—	100.0
Non-Farm Upbringing	"In what kind of place did you live most of the time up to age 15 years?"	On a farm or ranch	0	22.5
		In the country, but not on a farm or ranch	1	77.5
		In a town or small city (less than 25,000 people)	1	
		In a city (25,000 or more people but less than 100,000 people)	1	
		In a large city (100,000 or more people)	1	
		In a suburb of a large city	1	
		No response: N=3		100.0
Non-South Upbringing	"In what state or territory of the U.S. or what foreign country did you live most of the time before you were 15 years old?"	Del, Md, DC, Va, N.C., S.C., Ga, Fla, W.Va., Ky, Tenn, Ala, Miss, Ark, La, Okla, Texas	0	30.3
		Others	1	69.7
		No response; N = 105		100.0
No Male At Home	"With whom were you living when you were 15 years old?"	Father and mother	0	87.6
		Father and stepmother	0	
		Mother and stepfather	0	
		Father	0	
		Mother	1	12.4
		Other	1	
		No response: N=11		100.0

Table 1 Continued

Variable	Question	Response Categories	Coding	Percentage Distribution of Valid Response
Father's Occupation	"Describe your father's usual kind of work DURING THE TIME YOU WERE 15 YEARS OLD" -- If you did not live with him at that age, describe the work of the male head of household (not yourself) where you lived at age 15. a. What kind of work was he doing? b. What kind of business or industry was this?	Open ended responses were first coded to Census 3-digit categories. These were recoded using Duncan's (1961) 2-digit values. Frequencies are shown grouped to save space.	3-9	8.4
			10-19	37.7
			20-29	10.9
			30-39	9.2
			40-49	6.2
			50-59	7.6
			60-69	3.3
			70-79	2.9
			80-89	1.7
			90-96	0.8
		No response, no male head at 15	29.9	11.3
		No response, male head at 15: N=83		100.0

Table 1 Continued

Variable	Question	Response Categories	Coding	Percentage Distribution of Valid Responses
Father's Education	"What was the highest grade of school completed by your father (or male head of household referred to in Question 14). -- If you are not sure, give your best guess.	8th grade or less	7	50.2
		9th, 10th, or 11th grade	10	16.5
		High school graduate	12	14.4
		Some college, but not bachelor's degree	14	4.9
		College graduate, bachelor's degree	16	1.9
		Graduate study beyond the bachelor's degree	18	1.1
		No response, no male head at 15	9.3	11.1
		No response, male head at 15: N=60		100.1
Age	How old are you?	Open ended	25	7.1
			26	8.6
			27	8.8
			28	10.0
			29	9.2
			30	10.4
			31	12.5
			32	13.7
			33	11.4
			34	8.3
		Non-respondents omitted from sample.		100.0
AFQT	Percentile rank on Armed Forces Qualification Test, taken from military records.	0-9th percentile	76	1.2
		10-12th percentile	82	3.5
		13-20 "	85	8.7
		21-30 "	90	12.9
		31-49 "	96	24.8
		50-64 "	103	14.9
		65-92 "	115	26.0
		93-100 "	130	8.1
		Respondents without scores omitted from sample		100.1
Years of Education	"What is the highest grade of regular school you have NOW COMPLETED?"	Less than 8th grade	6	2.6
		8th grade	8	6.2
		9th, 10th, or 11th grade	10	17.2
		High school graduate	12	42.5
		Some college but less than two years	13	11.8
		Two or more years of college but no bachelor's degree	14	7.7
		College bachelor's degree	16	8.1
		Graduate study beyond the bachelor's degree	18	3.9
		No response: N=35		100.0

Table 1 Continued

Variable	Question	Response Categories	Coding	Percentage Distribution of Valid Responses
College Track in High School	4. "What best describes your study program during the last year you were in high school?"	College preparatory	1	20.8
		Commercial	0	
		General	0	79.2
		Vocational	0	
		Never entered high school	0	
		No response: N=32		
				100.0
Work Experience		Responses in single years.	0 -3	3.7
		Frequencies shown grouped	4-6	17.5
		to save space.	7-9	28.1
		Work Experience in 1964	10-12	27.4
		Age in 1964 -	13-15	17.5
		Education - 6	16-18	4.8
			19- 20	1.0
		Non-respondents on education: N=35	--	100.0
Occupation	20a. What kind of work are you doing?	Open ended responses were	3-9	7.3
		first coded to Census 3-	10-19	23.6
		digit categories, then	20-29	15.0
		recoded to Duncan's 2-	30-39	11.1
		digit scores. Frequencies	40-49	12.1
		are shown grouped to save	50-59	9.3
		space.	60-69	9.1
			70-79	6.2
			80-89	5.5
			90-96	0.8
		No response: N = 46		100.0
Job Tenure	20e. Give the length of time you have worked on this job.	Less than 6 months	.25	11.3
		6 months - 1 year	.75	8.7
		1 to 3 years	2	22.0
		3 to 5 years	4	17.4
		5 years or more	7	40.6
		No response: N=26		100.0

Table 1 Continued

Variable	Question	Response Categories	Coding	Percentage Distribution of Valid Responses
Experience Since School On Other Jobs	2. How old were you when you stopped going to school full-time? Do not count summer time between school years as stopping full-time school.	Experience Since School On Other Jobs = Age - Age At School Completion - Tenure Responses given in single years. Frequencies shown grouped to save space.	LT 0	2.2
			0-3	13.1
			3.1 - 6	24.1
			6.1 - 9	31.2
			9.1 - 12	18.4
			12.1 - 15	8.0
			15.1 - 18	2.8
			18.1 - 21	.2
		No Response: N=64		100.0
Earnings	21. What do you expect to earn from work at all jobs, businesses, or professions during 1964, before taxes and other deductions.	Nothing	Omitted from sample	
		Less than $1000	500	1.4
		$1000 to $2999	2000	6.0
		$3000 to $4999	4000	21.5
		$5000 to $7499	6200	45.3
		$7500 to $9999	8600	17.8
		$10,000 to $14,999	12000	6.3
		$15,000 or more	20000	1.8
		No response: N=36	----	100.1
Job Satisfaction	20g. "Describe your feelings about this job"	Extremely satisfied	.97 [a]	42.2
		Somewhat satisfied	- .42	46.3
		Somewhat dissatisfied	-1.81	9.9
		Extremely dissatisfied	-3.20	1.6
		No response: N=39	----	100.0

[a] Coded in equal intervals to produce a mean of zero and a standard deviation of one for men with complete data on all other items.

Table 2 : Means and Standard Deviations for Out of School Veterans Aged 25-34 in 1964 with Earnings and AFQT Scores and for OCG Males Aged 25-34 in 1962 with Complete Data

	Sample Means			Sample S.D.'s		
Variable	All Veterans	Veterans with Full Data	OCG Men with Full Data[c]	All Veterans	Veterans with Full Data	OCG Men with Full Data
White	.935	.953	.887	.247	.212	.316
Father's Education[a]	9.098	9.121	8.522	2.547	2.579	3.818
Father's Occupation[a]	28.415	28.968	29.395	19.332	19.674	21.417
No Male at Home[b]	.124	.123	.149	.330	.329	.356
Non-Farm Upbringing	.775	.770	.842	.418	.421	.365
Non-South Upbringing	.697	.712	.688	.460	.453	.463
Age	29.817	29.801	29.588	2.700	2.751	2.883
AFQT	102.277	103.411	NA	13.582	13.685	NA
Years of Education	12.157	12.254	11.942	2.473	2.469	3.310
Work Experience	11.660	11.547	10.495	3.665	3.705	4.234
Job Tenure	4.069	4.114	NA	2.655	2.640	NA
Occupation	38.063	38.631	38.852	22.886	22.944	25.608
Earnings[c]	6443	6537	5467	3018	3002	3400
Ln Earnings[c]	8.656	8.679	8.401	.523	[illegible]	.738
Earnings$^{1/3}$[c]	18.168	18.283	16.900	2.881	2.797	3.591
Job Satisfaction	-.013	-.009	NA	.985	.989	NA
N	1815	1438	3166	1815	1438	3166

a. OCG variables refer to the head of household's education and occupation.
b. OCG variable covers only fathers, not other male heads.
c. OCG variable is 1961 income not 1964 earnings.
d. OCG sample includes men with incomes over zero, not earnings over zero.

Table 2A: Correlations Among Selected Variables for Out of School Men with Earnings Aged 25 to 34 with Complete Data: 1438 Veterans (Top Row) vs. 3166 OCG Men (Bottom Row)

	White	Father's Education	Father's Occupation	No Male Head	Non-Farm	Age	AFQT	Years of Education	Work Experience	Occupation	Annual Earnings	Ln Earnings	Earnings$^{1/3}$	Job Satisfaction
White	1.000 1.000													
Father's Education	-.016 .141	1.000 1.000												
Father's Occupation	.093 .171	.442 .484	1.000 1.000											
No Male at Home	-.027 -.101	.054 .012	-.001 -.031	1.000 1.000										
Non-Farm	-.004 .019	.164 .156	.295 .268	.086 .052	1.000 1.000									
Age	-.035 -.022	-.076 -.064	-.034 -.008	.044 .024	-.038 -.036	1.000 1.000								
AFQT	.161 -	.211 -	.217 -	-.013 -	.141 -	-.057 -	1.000 -							
Years of Education	.014 .203	.309 .436	.302 .423	-.056 -.086	.179 .182	-.005 -.036	.506 -	1.000 1.000						
Work Experience	-.035 -.124	-.262 -.355	-.227 -.314	.070 -.076	-.147 -.144	.746 .708	-.380 -	-.670 -.719	1.000 1.000					
Occupation	.060 .252	.275 .368	.289 .410	.001 -.064	.195 .190	.081 .042	.368 -	.574 .663	-.323 -.458	1.000 1.000				
Earnings (Income)	.131 .245	.151 .213	.192 .263	-.007 -.043	.120 .154	.136 .198	.281 -	.304 .355	-.102 -.116	.364 .450	1.000 1.000			
Ln Earnings (Ln Income)	.157 .304	.131 .211	.184 .228	.000 -.070	.141 .169	.123 .148	.263 -	.279 .334	-.094 -.124	.361 .409	.882 .813	1.000 1.000		
Earnings$^{1/3}$ (Income$^{1/3}$)	.153 .304	.147 .228	.197 .259	-.003 -.066	.140 .173	.134 .177	.283 -	.303 .366	-.103 -.130	.378 .454	.953 .916	.982 .974	1.000 1.000	
Job Satisfaction	.076 -	.041 -	.034 -	.010 -	.005 -	.028 -	-.030 -	.040 -	-.006 -	.123 -	.185 -	.216 -	.211 -	1.000 -

Table 3A

Respondent Characteristics by Level of Father's Education: Out of School Veterans Aged 25-34 in 1964 With AFQT Scores and Earnings

Level of Father's Education	N	AFQT Mean	AFQT SD	Years of Education Mean	Years of Education SD	Occupation Mean	Occupation SD	Annual Earnings Mean	Annual Earnings SD	Earnings$^{1/3}$ Mean	Earnings$^{1/3}$ SD	Ln Earnings Mean	Ln Earnings SD
Total	1815	102.291	13.505	12.158	2.472	38.063	22.891	6443	3019	18.169	2.897	8.657	.525
0-8	880	100.109	12.814	11.654	2.349	33.374	20.933	6089	2904	17.824	2.841	8.599	.531
9-11	290	104.555	13.438	12.581	2.356	41.759	23.249	6820	2916	18.566	2.785	8.726	.499
12	253	104.657	13.036	12.892	1.991	41.787	23.568	6742	3160	18.450	2.916	8.703	.528
13-15	86	109.689	13.776	13.952	2.371	56.638	21.096	7565	3118	19.290	2.610	8.849	.445
16	33	110.666	12.371	14.544	2.177	56.275	22.825	8282	2777	19.963	2.389	8.960	.371
17+	19	107.019	17.133	14.871	2.408	55.316	27.603	7841	4722	19.075	4.134	8.765	.761
Not Reported: Male at Home	60	96.108	11.979	11.182	2.573	32.537	17.704	5572	3522	17.087	3.377	8.453	.635
No Male at Home	194	102.484	14.383	11.729	2.70	37.146	23.398	6405	2781	18.194	2.665	8.669	/
Eta^2		.051		.099		.080		.029		.031		.027	
Number of Respondents Reporting Dependent Variable		1815		1779		1769		1779		1779		1779	

Respondent Characteristics by Level of Father's Occupation: Out of School Veterans Aged 25-34 in 1964 With AFQT Scores and Earnings

Father's Duncan Score	N	AFQT		Years of Education		Occupation		Annual Earnings		$\text{Earnings}^{1/3}$		Ln Earnings	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Total	1815	102.294	13.482	12.158	2.471	38.063	22.892	6444	3019	18.169	2.879	8.657	.522
3-9	146	98.029	12.754	11.408	2.520	29.820	20.213	5786	3046	17.427	3.083	8.524	.565
10-19	653	100.347	12.043	11.625	2.231	32.243	20 846	5879	2801	17.599	2.879	8.558	.551
20-29	189	102.493	13.303	12.190	2.239	38.463	21.265	6497	2391	18.363	2.395	8.702	.437
30-39	159	103.943	12.657	12.630	2.283	41.527	21.944	6803	2387	18.663	2.378	8.751	.435
40-49	107	103.707	14.256	12.700	2.394	46.543	23.159	7302	3630	18.943	2.951	8.789	.465
50-59	132	108.297	12.935	13.026	2.424	46.804	24.625	7475	3470	19.195	2.593	8.838	.389
60-69	57	110.634	13.047	14.089	2.391	58.296	21.407	7852	3015	19.559	2.533	8.895	.400
70-79	50	109.239	13.905	13.955	2.015	49.650	24.835	7112	3123	18.811	2.914	8.762	.530
80-89	30	108.285	12.335	13.958	2.078	53.689	19.233	7814	2690	19.551	2.490	8.893	.409
90-96	14	109.604	15.204	15.080	3.008	52.952	30.453	8651	6178	19.362	5.133	8.774	.921
ot Reported:													
ale at Home	83	96.422	10.159	11.930	2.434	36.833	18.742	6223	3565	17.753	3.487	8.563	.674
o Male at ome	196	102.503	14.371	11.762	2.737	37.699	23.692	6464	2917	18.232	2.727	8.674	.474
Eta^2		.066		.096		.098		.047		.051		.047	
Number of Respondents Reporting Dependent Variable		1815		1779		1769		1779		1779		1779	

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Table 6

Respondent Characteristics by Race: Out of School Veterans Aged 25-34 in 1964 With AFQT Scores and Earnings

Race	N	AFQT		Years of Education		Occupation		Annual Earnings		Earnings$^{1/3}$		Ln Earnings	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Total	1815	102.279	13.584	12.157	2.473	38.064	22.886	6443	3019	18.168	2.881	8.656	.524
Non-White	118	92.352	10.929	12.057	2.586	30.478	19.752	4727	2615	16.198	3.177	8.290	.653
White	1687	102.971	13.500	12.159	2.462	38.530	23.008	6560	3013	18.302	2.312	8.681	.504
Not Reported	10	102.327	10.885	13.003	3.192	41.907	20.939	7358	2267	19.297	1.784	8.869	.262
Eta^2		.037		.001		.007		.023		.034		.036	
Number of Respondents Reporting Dependent Variable		1815		1779		1769		1779		1779		1779	

Table 7A

Respondent Characteristics by Age: Out of School Veterans Aged 25-34 in 1964 With AFQT Scores and Earnings

Age	N	AFQT		Years of Education		Occupation		Annual Earnings		Earnings$^{1/3}$		Ln Earnings	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Total	1815	102.287	13.537	12.157	2.473	38.064	22.888	6443	3020	18.168	2.881	8.657	.529
25-29	794	103.253	12.794	12.109	2.127	36.481	22.180	6068	2739	17.835	2.740	8.604	.515
30-34	1021	101.537	14.049	12.195	2.710	39.283	23.357	6736	3192	18.428	2.961	8.698	.537
Eta^2		.004		.000		.000		.012		.010		.007	
Number of Respondents Reporting Dependent Variable		1815		1779		1769		1779		1779		1779	

Note: Those not reporting age were excluded from the sample.

Table 8A

Respondent Characteristics by AFQT Score: Out of School Veterans Aged 25-34 in 1964 With AFQT Scores and Earnings

AFQT Percentile Rank	Mean Score	N	Years of Education		Occupation		Annual Earnings			Earnings$^{1/3}$		ln Earnings	
			Mean	SD	Mean	SD	Mean	SD	V	Mean	SD	Mean	SD
Total	(102)	1815	12.158	2.471	38.063	22.892	6443	3019	.469	18.169	2.879	8.657	.519
0-9	(76)	21	9.686	2.477	24.445	14.787	6040	3559	.589	17.732	2.938	8.589	.476
10-12	(82)	63	9.198	2.318	21.916	14.911	4613	2048	.444	16.172	2.928	8.290	.643
13-20	(85)	157	10.177	2.293	27.967	17.912	5364	2827	.527	16.906	3.314	8.415	.675
21-30	(90)	233	11.121	2.114	29.651	17.605	5697	2376	.417	17.510	2.542	8.552	.489
31-49	(96)	450	11.774	2.059	34.512	20.670	6118	2734	.447	17.935	2.543	8.629	.444
50-64	(103)	271	12.384	1.957	37.554	21.115	6342	3148	.496	18.079	2.810	8.647	.481
65-92	(115)	472	13.350	2.137	46.242	24.611	7248	2933	.405	18.982	2.722	8.795	.481
93-100	(130)	148	14.254	2.266	55.586	22.499	8190	3710	.453	19.731	2.936	8.911	.474
Eta^2			.264		.143		.081			.088		.081	
Number of Respondents Reporting Dependent Variable			1779		1769		1779			1779		1779	

Table 8B

Regressions of Respondent Characteristics on AFQT Score:
1438 Out of School Veterans Aged 25-34 in 1964 with Complete Data.

Dependent Variable		Unstandardized Coefficient (and Standard Errors) of Independent Variables				
		AFQT	AFQT^2	Constant	R^2	SD of Residuals
Education	(1)	.0914 (.0041)		2.8060	.2564	2.1299
	(2)	.3494 (.0597)	-.0012 (.0003)	-10.5916	.2660	2.1168
Occupation	(1)	.6177 (.0411)		-25.2500	.1358	21.3376
	(2)	[.1205] (.6021)	[.0024] (.0028)	.5664	.1361	21.3399
Annual Earnings	(1)	61.69 (5.56)		157.41	.0791	2881.8
	(2)	[66.40] (81.34)	[-.02] (.38)	-87.39	.0791	2882.8
Earnings$^{1/3}$	(1)	.0579 (.0052)		12.2974	.0802	2.6834
	(2)	[.1192] (.0757)	[-.0003] (.0004)	9.1148	.0806	2.6837
Ln Earnings	(1)	.0096 (.0009)		7.6883	.0691	.4815
	(2)	.0260 (.0136)	[-.0001] (.0001)	6.8362	.0700	.4814

Coefficients in brackets are less than 1.96 times their standard error.

Table 8C

Means, Standard Deviations, and Correlations for Education, AFQT, and Earnings: 5,972 White Men Aged 30-37 in 1964 From Cutright's Sample vs 803 Men Aged 30-34 in 1964 From the CPS Veterans Sample

				Correlations		
		Mean	S.D.	AFQT	Education	Earnings
AFQT	Cutright	NA	NA	1.000		
	Vets	102.7	14.29	1.000		
Education	Cutright	10.66	2.68	.683	1.000	
	Vets	12.26	2.75	.554	1.000	
Earnings	Cutright	6077	3964	.327	.322	1.000
	Vets	6823	3145	.377	.332	1.000

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Table 9A

Respondent Characteristics by Education: Veterans Aged 25-34 in 1964 With AFQT Scores, and Earnings

Years of Education	N	AFQT Score		Occupation		Annual Earnings		Earnings$^{1/3}$		Ln Earnings	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
All	1815	102.293	13.494	38.063	22.892	6444	3019	18.169	2.879	8.657	.523
Less than 8th grade	47	85.764	5.953	22.182	14.139	4478	2040	15.974	3.028	8.248	.671
8th grade	109	91.067	7.441	26.296	15.825	5074	2843	16.584	3.270	8.358	.669
9-11th grade	306	94.894	11.041	25.031	15.335	5713	2823	17.415	2.896	8.526	.548
12th grade	757	102.351	11.732	32.119	18.422	6129	2705	17.940	2.571	8.628	.466
Less than 2 years college	210	107.573	13.087	47.196	21.232	7392	3060	19.160	2.481	8.833	.397
2+ yrs. college, no degree	138	109.554	13.378	50.413	19.171	7125	3064	18.845	2.805	8.771	.496
College BA or BS	144	113.367	11.447	69.206	15.946	8156	2754	19.867	2.321	8.945	.369
Graduate study	69	114.707	12.858	74.303	13.624	8970	4377	20.155	3.726	8.943	.683
Not reported	35	92.782	9.795	31.643	20.506	6106	1992	18.048	2.097	8.658	.367
Eta^2		.266		.397		.105		.111		.100	
Number of respondents reporting dependent variable		1815		1769		1779		1779		1779	

Table 9B

Regressions of Occupation and Earnings on Education: 1438 Out of School Veterans Aged 25-34 in 1964 With Complete Data

Dependent Variable		Years of Education	Years of Higher Educ.	College Graduation	Constant	R^2	SD of Residuals
		Unstandardized Coefficients (and Standard Errors) of Independent Variables					
Occupation	(1)	5.3381 (.2007)			-26.7788	.3300	18.7876
	(2)	2.2810 (.3571)	4.1800 (.7213)	7.2370 (2.7165)	5.7929	.3810	18.0704
Annual Earnings	(1)	369.08 (30.57)			2013.95	.0922	2861
	(2)	249.26 (56.45)	[183.41] (114.03)	[162.34] (429.41)	3287.36	.0964	2857
$\text{Earnings}^{1/3}$	(1)	.3431 (.0285)			14.0786	.0917	2.6665
	(2)	.2855 (.0527)	[.0706] (.1064)	[.1866] (.4008)	14.6937	.0930	2.6664
Ln Earnings	(1)	.0563 (.0051)			7.9889	.0778	.4792
	(2)	.0544 (.0095)	[-.0037] (.0191)	[.0435] (.0721)	8.0102	.0780	.4795

[Coefficients in brackets are less than 1.96 their standard error.]

Table 10

Regressions of Occupation and Earnings on Education and Experience: 1438 Out of School Veterans With Earnings, Aged 25-34 in 1964, With Complete Data

Dependent Variable		Years of Education	Years of Higher Education	College Graduation	Work Experience	Experience^2	Constant	R^2	SD of Residuals
Occupation	(1)	2.789 (.428)	3.926 (.731)	7.422 (2.714)	.380 (.176)		-3.835	.383	18.050
	(2)	3.257 (.495)	3.325 (.796)	7.201 (2.714)	[-.770] (.634)	[.061] (.033)	-4.465	.385	18.034
Earnings	(1)	438.76 (67.13)	[92.93] (114.60)	[213.79] (425.77)	141.79 (27.65)		-308.92	.113	2832
	(2)	444.90 (77.67)	[85.04] (125.10)	[210.89] (42[illegible].32)	[126.73] (99.61)	[.81] (5.13)	-317.18	.113	2833
Earnings$^{1/3}$	(1)	.4670 (.0626)	[-.0149] (.1069)	[.2321] (.3972)	.1361 (.0258)		11.2453	.110	2.6419
	(2)	.4958 (.0725)	[-.0518] (.1167)	[.2185] (.3977)	[.0656] (.0929)	[.0038] (.0048)	11.2066	.111	2.6422
Ln Earnings	(1)	.08437 (.01127)	[-.01558] (.01925)	[.04435] (.07151)	.02308 (.00464)		7.43424	.094	.4756
	(2)	.09152 (.01304)	[-.02475] (.02100)	[.04098] (.07157)	[.00556] (.01672)	[.00094] (.00086)	7.42464	.094	.4756

[Coefficients in brackets are less than twice there standard error.]

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Table 11: Means, Standard Deviations, and Correlations for Out-of-School Men With Earnings and With Complete Data: 803 Veterans Aged 30-34 (Top Row) vs 1567 OCG Men Aged 30-34 (Bottom Row)

Variable	Mean	S.D.	White	Father's Education	Father's Occupation	No Male Head	Non-Farm	Non-South	AFQT	Years of Education	Work Experience	Occupation	Annual Earnings	ln Earnings	Job Satisfaction
White	.940	.238	1.000												
	.904	.293	1.000												
Father's Education	8.980	2.531	-.049	1.000											
	8.427	3.814	.139	1.000											
Father's Occupation	28.611	19.705	.100	.445	1.000										
	29.833	22.239	.147	.502	1.000										
No Male At Home	.136	.343	-.025	.081	-.003	1.000									
	.091	.287	-.033	.017	-.028	1.000									
Non-Farm	.759	.428	-.012	.200	.313	.086	1.000								
	.821	.384.	.038	.158	.301	.033	1.000								
Non-South	.727	.446	.213	.145	.166	-.028	.236	1.000							
	.704	.457	.223	.156	.138	.002	.168	1.000							
AFQT	102.671	14.286	.171	.223	.234	.030	.193	.255	1.000						
	-	-	-	-	-	-	-	-	-						
Years of Education	12.256	2.746	.019	.300	.311	-.043	.204	.185	.554	1.000					
	12.014	3.335	.212	.429	.464	-.008	-.187	.217	-	1.000					
Work Experience	11.670	3.087	.002	-.262	-.275	.038	-.182	-.129	-.474	-.902	1.000				
	12.842	3.412	-.193	-.404	-.431	-.009	-.145	-.189	-	-.895	1.000				
Occupation	40.008	23.368	.092	.260	.297	-.005	.204	.093	.431	.596	-.519	1.000			
	40.247	25.746	.245	.372	.447	.008	.234	.164	-	.653	-.608	1.000			
Annual Earnings	6824	3145	.149	.144	.269	-.020	.146	.217	.377	.332	-.253	.382	1.000		
	6027	3639	.231	.237	.344	-.003	.205	.200	-	.429	.362	.512	-		
ln Earnings	8.722	.498	.178	.139	.272	-.023	.171	.218	.351	.312	-.236	.381	.886	1.000	
	8.501	.740	.284	.2[illegible]2	.297	.014	.219	.198	-	.393	-.331	.466	.822	-	
Job Satisfaction	.011	1.000	.075	.026	.059	.025	.003	-.012	-.043	.019	-.005	.077	.186	.205	1.000
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 12A: Regressions of AFQT on Background Characteristics and Education: 803 Out-of-School Veterans Aged 30-34 With Earnings and With Complete Data.

Independent Variable	r	Equation 1 B(S.E.)	Equation 1 Beta	Equation 2 B(S.E.)	Equation 2 Beta	Equation 3 B(S.E.)	Equation 3 Beta	Equation 4 B(S.E.)	Equation 4 Beta
White	.171	8.00075 (2.05094)	.133	[.37059] (3.49771)	[.006]	[5.14678] (3.06293)	[.086]	[5.41617] (3.06690)	[.090]
Father's Education	.223	.78567 (.21071)	.139	1.79484 (.34837)	.318	.90872 (.30868)	.161	.90421 (.30862)	.160
Father's Occupation	.234	.07399 (.02789)	.102	[-.04151] (.15063)	[-.057]	[.01688] (.13132)	[.023]	[.02255] (.13130)	[.031]
No Male At Home	.030	[.79064] (1.38397)	[.019]	[.12680] (1.38789)	[.003]	[1.59547] (1.21302)	[.038]	[1.66340] (1.21348)	[.040]
Non-Farm Upbringing	.193	3.12303 (1.19070)	.094	5.84924 (1.84940)	.175	3.18602 (1.62039)	.095	[3.19607] (1.62024)	[.096]
Non-South Upbringing	.255	5.33607 (1.12596)	.166	8.19437 (1.91608)	.256	5.20768 (1.68035)	.162	5.16950 (1.68607)	.161
Age	.044	[.24088] (.35421)	[.022]	[.34843] (.35067)	[.032]	[.50835] (.30576)	[.047]	[.52802] (.30650)	[.049]
Father's Ed x Father's Occ.*	.221			-.02454 (.00686)	-.466	-.01607 (.00600)	-.305	-.01590 (.00601)	-.302
White x Father's Occ.*	.275			.38343 (.13705)	.550	[.16486] (.12023)	[.237]	[.15828] (.12029)	[.227]
Non Farm x Non South *	.236			-5.14904 (2.30486)	-.177	[-2.91583] (2.01351)	[-.10017]	[-3.03848] (2.01451)	[-.104]
Years of Education	.554					2.57301 (.16212)	.495	2.79280 (.29335)	.537
Years Ed. Past H.S.	.449							[.10690] (.60415)	[.014]
B.A.	.356							[-2.99297] (2.29062)	[-.075]
Constant		71.93023		65.28550		36.72034		33.57533	
R^2		.13982		.16559		.36712		.36939	
SD of Residual		13.30809		13.13205		11.44402		11.43792	

r = zero order correlation with AFQT B = unstandardized coefficient
Beta = standardized coefficient S.E.= standard error of B
Coefficients in brackets are less than twice their standard error.

* These terms have not been made orthogonal to their components.

Table 13A: Regressions of Years of Education on Background Characteristics and AFQT: 803 Out-of-School Veterans Aged 30-34 With Earnings and With Complete Data.

Independent Variable	r	Equation 1		Equation 2		Equation 3		Equation 4	
		B(S.E.)	Beta	B(S.E.)	Beta	B(S.E.)	Beta	B(S.E.)	Beta
White	.019	[-.13683] (.39056)	[-.012]	-1.80182 (.66871)	-.156	-1.86725 (.58171)	-.162	-1.82394 (.57942)	-.158
Father's Education	.300	.20782 (.04013)	.192	.34662 (.06665)	.319	.17605 (.05895)	.162	.17214 (.05871)	.159
Father's Occupation	.311	.02515 (.00531)	.180	[-.01954] (.02878)	[-.140]	[-.01739] (.02503)	[-.125]	[-.01273] (.02498)	[-.091]
No Male Head	-.043	[-.50106] (.26355)	[-.063]	-.55475 (.26545)	-.069	-.57569 (.23091)	-.072	-.54465 (.23018)	-.068
Non-Farm Upbringing	.204	.56695 (.22675)	.088	.49883 (.22580)	.078	[.24714] (.19705)	[.039]	[.21132] (.19662)	[.033]
Non-South Upbringing	.184	.67727 (.21442)	.110	.57528 (.21427)	.093	[.12994] (.18845)	[.021]	[.06372] (.18913)	[.010]
Age	-.029	[-.08356] (.06745)	[-.041]	[-.06527] (.06708)	[-.032]	[-.09640] (.05839)	[-.047]	[-.06637] (.05911)	[-.032]
White x Father's Occ.*	.312			.08176 (.02617)	.610	.04737 (.02287)	.354	[.04152] (.02287)	[.310]
Father's Ed x Father's Occ.*	.320			-.00333 (.00131)	-.329	[-.00099] (.00115)	[-.098]	[-.00086] (.00115)	[-.085]
AFQT	.554					.09433 (.00590)	.491	.32361 (.08207)	1.684
AFQT^2	.547							-.00109 (.00039)	-1.191
Constant		11.61121		11.44989		5.09642		-7.64871	
R^2		.15555		.17188		.37417		.38031	
SD of Residual		2.53427		2.51280		2.18582		2.17644	

r = zero order correlation with AFQT
Beta = standardized coefficient
B = unstandardized coefficient
S.E. = standard error of B
Coefficients in brackets are less than twice their standard error.

* These terms have not been made orthogonal to their components.

Table 14A

Regressions of Occupation on Characteristics of 803 Out of School Veterans Aged 30-34 with Earnings and with Complete Data

Independent Variable	r	Equation 1		Equation 2		Equation 3		Equation 4	
		B (S.E.)	beta	B (S.E.)	beta	B (S.E.)	beta	B (S.E.)	beta
White	.092	8.321 (3.375)	.085	[3.474] (3.173)	[.035]	8.048 (2.724)	.082	6.076 (2.735)	.062
Father's Education	.260	1.517 (.347)	.164	1.042 (.326)	.113	[.456] (.285)	[.049]	[.399] (.282)	[.043]
Father's Occupation	.297	.211 (.046)	.178	.167 (.043)	.141	[.071] (.038)	[.060]	[.069) (.037)	[.058]
No Male Head	-.005	[-1.777] (2.278)	[-.026]	[-2.256] (2.122)	[-.033]	[-.015] (1.843	[-.000]	[-.518] (1.827)	[-.008]
Non-Farm Upbringing	.204	6.581 (1.960)	.121	4.706 (1.833)	.086	4.494 (1.588)	.082	4.143 (1.573)	.076
Non-South Upbringing	.093	[-.379] (1.849)	[-.007]	-3.630 (1.746)	-.069	[-1.778] (1.512)	[-.034]	[-2.590] (1.509)	[-.049]
Years of Education	.596					1.641 (.446)	.193	.989 (.468)	.115
Years of Higher Education	.631					4.472 (.929)	.351	4.466 (.919)	.351
College Graduation	.559					[5.438] (3.532)	[.083]	[6.070] (3.497)	[.093]
AFQT	.431			.603 (.054)	.369			.230 (.054)	.140
Constant		8.039		-39.915		-1.597		-13.852	
R^2		.128		.244		.435		.448	
S.D. of Residuals		21.910		20.402		17.563		17.475	

r = Zero-order correlation with Occupation
B = Unstandardized Coefficient
S.E. = Standard Error of B
beta = Standardized Coefficient
Coefficients in brackets are less than twice their standard errors.

Table 14D

Regressions of Occupation on Characteristics of Out-of-School Veterans Aged 30-34 with Earnings and Complete Data; Separately for Men with White Collar, Blue Collar, and Farm Fathers

Independent Variable	153 Men with White Collar Fathers		415 Men with Blue Collar Fathers		143 Men with Farm Fathers	
	Eq. 1	Eq. 2	Eq. 1	Eq. 2	Eq. 1	Eq. 2
	B (S.E.)	B (S.E.)	B (S.E.)	B (S.E.)	B (S.E.)	B (S.E.)
White	[-3.744] (12.100)	[-3.420] (10.021)	[.805] (4.117)	[4.310] (3.554)	[8.870] (7.369)	[7.931] (6.558)
Father's Education	[.630] (.568)	[-.111] (.480)	1.290 (.462)	[.575] (.401)	3.103 (1.026)	2.843 (.921)
Father's Occupation	[.053] (.113)	[.038] (.094)	.226 (.076)	.160 (.066)	[.751] (.960)	[.803] (.876)
No Male Head	[-5.211] (13.354)	[-1.820] (11.096)	[-7.803] (6.683)	[-2.138] (5.765)	[-14.428] (8.900)	-15.854 (7.906)
Non-Farm Upbringing	[3.301] (6.622)	[.873] (5.627)	[6.083] (3.280)	5.897 (2.821)	[4.119] (7.500)	[2.417] (7.033)
Non-South Upbringing	[-7.792] (4.591)	[-4.944] (3.836)	[.029] (2.488)	.956 (2.150)	[-4.217] (3.765)	-6.071 (3.354)
AFQT	.848 (.130)	.338 (.126)	.522 (.077)	.161 (.074)	[.268] (.139)	[.159] (.137)
Years of Education		[2.169] (1.549)		[1.244] .671		[-.615] (.930)
Years of Higher Education		2.506 (2.184)		5.281 (1.320)		[3.029] (2.628)
College Graduation		7.474 (5.853)		[.246] (5.164)		28.173 (11.999)
AFQT x Ed*		–		[-]		[-]
Constant	-43.286	-17.514	-36.912	-16.116	-35.460	-18.220
R^2	.265	.506	.193	.411	.150	.352
S.D. of Residuals	20.706	17.147	19.853	17.031	20.437	18.042

B = unstandardized coefficient

S.E. = standard error

Coefficients in brackets are less than twice their standard errors.

Signs indicate coefficients of a given interaction term if it is added to the equation shown.

* This terms has not been made orthogonel to its components.

NOTE: N's Do not add to 803 due to elimination of cases with missing data on traits not shown.

Table 14E

Regressions of Occupation on Characteristics of Out-of-School Veterans Aged 30-34 with Earnings and with Complete Data, Separately for Men with Different AFQT Scores

Independent Variable	236 Mean Below 31st Percentile B (S.E.)	264 Mean Below 31st & 64th Percentiles B (S.E.)	303 Mean Above 64th Percentile B (S.E.)
White	[1.962] (3.753)	[2.010] (4.410)	28.794 (7.974)
Father's Education	[-.507] (.566)	1.173 (.487)	[.251] (.451)
Father's Occupation	[.103] (.080)	[-.005] (.060)	[.117] (.061)
No Male Head	[-3.726] (3.145)	[2.644] (3.191)	[.507] (3.171)
Non-Farm Upbringing	[3.617] (2.520)	5.918 (2.503)	[3.810] (3.197)
Non-South Upbringing	[.957] (2.425)	[-1.812] (2.403)	[-5.831] (3.056)
AFQT	[.115] (.305)	[.213] (.292)	[.170] (.178)
Years of Education	[.557] (.612)	[.762] (.892)	[3.569] (1.868)
Years Higher Education	5.003 (2.219)	5.845 (1.648)	[.690] (2.357)
College Graduation	[18.451] (11.158)	[3.914] (6.396)	[6.467] (4.830)
Constant	9.886	-14.703	-54.102
R^2	.178	.455	.397
S.D. of Residuals	16.504	15.882	19.059

B = unstandardized coefficient S.E. = standard error

Coefficients in brackets are less than twice their standard errors.

Table 15A: Regressions of Annual Earnings on Characteristics of 803 Out of School Veterans Aged 30-34 with Earnings and with Complete Data.

Independent Variable	r	Equation 1 B (S.E.)	Equation 1 beta	Equation 2 B (S.E.)	Equation 2 beta	Equation 3 B (S.E.)	Equation 3 beta	Equation 4 B (S.E.)	Equation 4 beta	Equation 5 B (S.E.)	Equation 5 beta
White	.149	1291 (458)	.098			1300 (441)	.098	886 (439)	.067	[664] (431)	[.050]
Father's Education	.144	[33] (47)	[.027]			[-31] (46)	[-.025]	[-43] (45)	[-.034]	[-58] (44)	[-.046]
Father's Occupation	.269	33 (6)	.210			26 (6)	.162	26 (6)	.161	23 (6)	.143
Male Head Absent	-.020	[-170] (309)	[-.019]			-20 (298)	[-.002]	[-125] (293)	[-.014]	[-129] (287)	[-.014]
Non Farm Upbringing	.146	[316] (266)	[.043]			[155] (257)	[.021]	[75] (253)	[.010]	[-36] (248)	[-.005]
Non South Upbringing	.217	1035 (251)	.146			784 (243)	.111	609 (241)	.086	743 (237)	.105
Years of Education	.332			639 (88)	.558	522 (88)	.456	368 (90)	.322	221 (92)	.193
Work Experience	-.253			256 (78)	.251	219 (76)	.215	196 (75)	.193	177 (74)	.174
AFQT	.377							50 (9)	.225	43 (9)	.196
Occupation	.382									31 (5)	.229
Constant		3384		-3994		-4507		-6729		-4874	
R^2		.113		.122		.179		.212		.243	
SD of Residuals		2972		2950		2863		2809		2752	

r = zero-order correlation with occupation

S.E. = standard error of B

Coefficient in brackets are less than twice their standard errors.

B = unstandardized coefficient

beta = standardized coefficient

Table 16A: Regressions of Ln Earnings on Characteristics of 803 Out of School Veterans Aged 30-34 With Earnings and With Complete Data

		Equation 1		Equation 2		Equation 3		Equation 4		Equation 5	
	r	B (S.E.)	beta	B (S.E.)	beta	B (S.E.)	beta	B (S.E.)	beta	B (S.E.)	beta
White	.178	.27274 (.07198)	.130			.27381 (.06983)	.131	.21792 (.05203)	.104	.18063 (.05107)	.086
Father's Education	.139	[.00445] (.00740)	[.023]			[-.00406] (.00729)	[-.024]	[-.00631] (.00537)	[-.032]	[-.00885] (.00526)	[-.045]
Father's Occupation	.272	-.00512 (.00098)	.203			[.00406] (.00096)	.161	.00401 (.00071)	.159	.00354 (.00069)	.140
Male Head Absent	-.023	[-.03353] (.04859)	[-.023]			[-.01218] (.04723)	[.008]	[-.02633] (.03478)	[-.026]	[-.02706] (.03400)	[-.019]
Non-Farm Upbringing	.171	.08679 (.04180)	.075			[.06394] (.04069)	[.055]	[.05310] (.02995)	[.046]	[.03444] (.02937)	[.030]
Non-South Upbringing	.218	.15092 (.03942	.135			.11455 (.03856	.103	.09093 (.02858)	.081	.11346 (.02808)	.102
Years of Education	.312			.09642 (.01047)	.532	.07650 (.01388)	.422	.05572 (.01069)	.308	.03099 (.01088)	.171
Work Experience	-.236			.03934 (.00931)	.244	.03323 (.01207)	.206	.03014 (.00888)	.187	.02691 (.00869)	.167
AFQT	.351							.00668 (.00103)	.192	.00563 (.00101)	.162
Occupation	.381									.00517 (.00063)	.243
Constant		8.10811		7.08127		6.93544		6.63553		6.94672	
R^2		.124		.108		.179		.202		.238	
SD. of Residuals		.46723		.47009		.45309		.44570		.43575	

Notes to table 16A:

r = zero-order correlation with Ln Earnings

B = unstandardized coefficient

S.E. = Standard error of B

beta = Standardized coefficient

Coefficients in brackets are less than twice their standard errors.

APPENDIX H: THE 1972 PROJECT TALENT LONGITUDINAL SURVEY

by James Crouse

The Project Talent Survey is a rich and largely unexploited source of information about the extent to which an individual's economic success is determined by his or her education, cognitive and non-cognitive traits, and family background. In 1960 Project Talent administered an extensive battery of tests and other questions to a stratified random sample of high school students in grades 9-12 in the United States. Talent followed up these students 1, 5, and 11 years after their expected graduation.

The Talent data include considerable information that is not available in the surveys described in the preceding appendices, including 65 different adolescent test scores and a wide range of questions on adolescent aspirations, attitudes, interests, and personality. Talent also collected follow-up data on respondents' actual years in the labor force. It thus provides a better basis than the other surveys we analyzed for determining how much of the effect of educational attainment on economic success is due to differences in cognitive skills and attitudes prior to school completion. Finally, it allows us to investigate the effects of experience independent of age.

Nevertheless, the data have several important limitations. There is no information on test scores, aspirations, or attitudes prior to high school, so there is no way of telling which of these characteristics develops first or affects the others. In addition, the respondents were only 11 years out of high school at the time of the most recent followup. This means that they were approximately 28 years old and had an average of only 9 years of work experience. Variation in earnings is therefore restricted.

This appendix is divided into five sections. Section 1 describes the sample. Section 2 describes the variables, coding, and procedures for handling missing data. Section 3 presents the univariate statistics for all variables. Section 4 describes bivariate relationships and examines non-linearities and their importance. Finally, Section 5 describes a series of selected multivariate relationships.

Sample

The basic Talent sample consisted of all students in grades 9-12 in a stratified random sample of 1,063 high schools (and associated junior high schools) in the United States. These public, private, and parochial schools comprised approximately 5 percent of all such schools in the United States. 987 of these high schools agreed to participate in the survey. Students in these schools were given the Talent test battery and questionnaires in the spring of 1960. Of the approximately 400,000 students given tests and questionnaires, 92,272 were in the eleventh grade.

91,602 of these students were mailed follow-up questionnaires in 1972, eleven years after they would have graduated from high school. The rest were deceased or had asked that Talent remove their name for its mailing list. 22,963 or about 25 percent of these individuals returned the questionnaire. Talent also did an intensive follow-up of a 3.57 percent sample of the non-respondents and was able to obtain a response rate of 83 percent from this group of initial non-respondents. My sample consists of a random 3.61 percent of the individuals who returned the initial questionnaire (N = 828) plus all of the individuals contacted successfully in the intensive followup of initial non-respondents (N = 2078). These 2906 persons thus represent a stratified random sample of American 11th graders with an overall response rate 12 years later of about 88 percent.

The analyses reported in this appendix were done on a subsample of these 2906 respondents. My primary interest at this point was in the determinants of life chances for males, of whom there were 1427.

I eliminated individuals who reported that they were still in school over half-time in 1972, since these persons are likely to have more education and lower earnings than similar individuals not in school. I also eliminated military personnel, Other members of the institutional population were excluded by the followup procedures. Finally, Talent collected earnings information only on respondents with paid jobs, so the questionnaire design eliminated all persons with zero or negative earnings. These restrictions left 1369 males who constitute the basic sample for the present analysis.

H4

Variables

Table 1 presents the 16 questions used in the analyses, the coding, and frequency distributions for the 1369 persons in the basic sample described above. Comment is needed for some of these variables.

Family Background. The frequency distribution for Race shows that over 93 percent of the sample was white. This compares to 91 percent in the 1970 Census. Only 68 individuals reported that they were black, and these individuals are probably not representative of the black population. For this reason my estimates of the effects of race are likely to be poor. Consequently, blacks and other minorities were combined, and no separate analyses were done for them.

Father's Education was reported in categories. I coded these categories to their means using 1960 Census figures. Jencks and Brown report that Talent twins' and siblings' reports of their father's education correlate 0.807.

Father's Occupation had 16 categories. These categories were coded according to our best estimate of its mean score on Duncan's scale. Jencks and Brown report a correlation of 0.856 between Talent twins' and siblings' reports on this item.

The question about Siblings asked for the total number of living children in the respondent's family, so 1 must be subtracted to obtain the exact number of siblings. Jencks and Brown report a correlation of 0.914 between twins' and siblings' reports on this item.

Test Scores. The Talent 11th grade battery included 65 tests covering cognitive skills. Talent formed 14 composites from these separate tests. I originally selected five of the separate tests and five of the composites as representative of all the tests in the Talent battery. After a number of analyses, I chose Talent's Academic Composite to use in the analyses in this chapter. The reasons were as follows.

The five composites had an average correlation of 0.857. Their correlations with Years of Education, Occupation, and Earnings did not differ appreciably. They had a higher average correlation with these dependent variables than did the separate tests. This partly reflects the lower reliability in these shorter, separate tests. It also reflects the narrower range of skills measured by any specific test. After entering Talent's Academic Composite,all other tests together never increased R^2 for Education, Occupation, or Earnings by more than 0.013. I therefore chose Talent's Academic Composite on the grounds that it probably captured most of the variance in the major dependent variables traceable to any of the Talent tests, and because it is probably more reliable than the separate tests.

This composite is the weighted sum of a student's score on tests of vocabulary, English, reading comprehension, creativity, abstract reasoning, and mathematics. Jencks and Brown suggest that this composite predicts subsequent success only insofar as it measures academic aptitude. The composite was standardized to a mean of 100 and standard deviation of 15 using the eleventh grade population mean and standard deviation reported by Talent. The actual reliability of this composite is unknown but should be higher than 0.90. 1/

Test scores are often standardized by age. In regressions of Education, Occupation, and Earnings, the addition of Age never changed the coefficient for Academic Composite more than 0.03. When I added Age to the multivariate equations described below, the coefficient for Academic Composite never changed more than 0.02, and the coefficient of Age was never significant statistically. I therefore did not standardize Academic Composite by Age.

Other Intervening Social-Psychological Variables. In addition to test scores, which were obtained during eleventh grade, Talent asked separate questions about math grades, science grades, foreign language grades, history and social studies grades, and English grades. The instructions to these questions asked students to report their grades in courses they had taken in ninth grade or later, so it is not possible to determine exactly when grades were earned. Talent also asked a global question about grades in all courses. I chose to average grades from the separate areas for two reasons. First, I regressed Education, Occupation, and Hourly Earnings on both Average Grades and Talent's global measure of grades. Talent's global measure for

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1/ The Talent staff has estimated this reliability to be greater than 0.97 in personal communication.

grades in all courses did not correlate as highly as Average Grades. Second, more people answered the separate grade questions than answered the one question about grades in all courses. As a further check I added grades in each specific area to regression equations that included Average Grades. The specific courses did not raise R^2 significantly.

Occupational Plans. This was a forced choice item having 36 categories. These categories were recoded into our best estimate of their mean Duncan score.

Education. Respondent's educational attainment was determined in the 11 year followup. Talent asked whether the respondent received a high school diploma and how much college he had completed. I constructed Years of Education from these two questions.

Experience. Talent asked respondents their years of full-time work experience since June 1961. If the respondents had done part-time work, they were to estimate its full-time equivalent. The mean work experience was 8-9 years. The mean education was 14.1 years, of which 2.1 years had to be accumulated after June 1961. When I estimated each respondents education past June 1961 and added his work experience to it, the sum had a mean of 8.9 + 2.1 = 11.0 years, leaving no time for unemployment or other non-participation in the labor force. This seems unlikely. Since the variance of this sum was 2.0, the results imply that respondents often went to school and worked at the same time, and included this work in their experience.

Occupation. Occupation was also determined in the 11 year followup. Talent asked whether the respondent had a paid job as of September 1, 1972, and what that job was. Talent coded this job into its own job code for occupation. Talent did not use the census classification of occupations, so Brown estimated the Duncan score of each Talent category.

Earnings. Talent asked whether the respondent had a paid job as of September 1, 1972. If so, he was asked to indicate his earnings before deducations on this job as of September 1, 1972, and then to specify whether this was an hourly, weekly, or monthly figure. Since Talent did not ask a question about annual earnings or income, one possibility would have been to construct such a figure using hours worked per week and weeks worked per year. I rejected this possibility because Talent's question on weeks worked was for the year preceding September 1, and possibly for a different job. I chose instead to compute hourly earnings as of September, 1972, since I could do this without using weeks worked. To the extent that individuals misspecify whether they reported monthly, weekly, or hourly earnings or misreport hours worked per week, the data will contain random errors. There is no way of knowing whether these estimates are more or less reliable than estimates obtained using other methods. Also, persons who were unemployed on this date but who would have had earnings, had the accounting period been longer, were not appropriately represented. Finally, transfer, asset, and other sources of income are not included. Thus, the Talent question is neither an ideal measure of earnings or of income.

Table 1 shows considerable missing data. I designated Race, Male Head Absent, Siblings, Test Score, Years of Education, Work Experience, Occupation, and Hourly Earnings as basic variables and eliminated respondents who were missing data on any of these from my "complete data" sample. I also designated Father's Education and Father's Occupation as basic variables, but I assigned those with missing data the mean if they reported that their family had no male head. If they reported that the family had a male head, but failed to report his Education or Occupation, I eliminated them from the complete data sample. Grades, Parents'

Influence on Education, Friends' Educational Plans, Educational Plans, Occupational Plans, and Earnings Plans were not considered basic. Unlike the basic variables these intervening variables only enter analyses presented toward the end of the chapter. Men who failed to answer these questions were assigned the mean, plus a dummy variable for being non-respondents. These restrictions left 839 men in the complete data sample.

Univariate Distributions

Table 2 shows the means and standard deviations of all the variables just described for the basic and complete data samples.

The respondents with complete data have slightly higher means on almost all variables than respondents with partial data. The assignment procedure for Father's Education and Father's Occupation resulted in a complete data sample which had a somewhat higher proportion of individuals who reported that their father was not at home during high school. However, none of these differences in means seem large enough to be of much substantive importance.

Except for Male Head Absent, Education and Occupation, the standard deviations for respondents with complete data are smaller than for all respondents. The unexpected increase for Education is probably related to the fact that the distribution of Education is truncated below 11 years and therefore positively skewed. Non-respondents were more likely to come from the lower end of this distribution than the upper end. But such individuals are also relatively close to the mean, so their elimination can increase the variance of

Education. The larger variability for Education may also contribute to the larger variability in the complete data sample observed for Occupation. However, the standard deviation for Hourly Earnings is smaller in the complete data sample. In any case, none of the changes in variability is large enough to be of much substantive interest.

In order to establish the representativeness of the Talent sample, I compared it to three other roughly comparable samples. The first of these is 568 men aged 27-29 from the 1962 OCG survey who had 11 or more years of education, positive income and complete data on other variables (see Jackson, Appendix B). The second is a sample of 934 men aged 27-29 from the 1970 Census 1/1000 sample who also had eleven or more years of education, positive earnings, and reported their race and age and education. The third is a sample of 1789 Wisconsin men approximately aged 28 in 1967 who had twelve or more years of education, were from non-farm backgrounds, not enrolled in school, employed in the civilian labor force, and had non-zero earnings.

The Talent sample includes fewer blacks than the OCG or Census. Men in the Talent sample also had somewhat more privileged backgrounds. Their fathers had more education and occupations of higher status than the OCG men. This is presumably because they were born later. Fewer Talent respondents had very poorly or very well educated fathers and fewer had fathers with very high or very low status occupations than OCG men. Presumably these differences result in part from the Talent survey being taken ten years later than the OCG. They may also partly be due to the Talent sample having fewer blacks.

Talent respondents have more education than men in the OCG and Census, and they also have a larger standard deviation. Wisconsin men appear to have a severely restricted standard deviation of Years of Education, probably because all of their respondents had at least graduated from high school, but also probably because education was determined at 25, so some men were still in school, and they were excluded. Talent respondents have more work experience than OCG and Census men, probably because Talent respondents included their jobs while attending college and also their part-time work. The occupational status of Talent respondents is higher than OCG or Wisconsin men, and the standard deviation of occupations for Talent men is slightly restricted compared to OCG but not Wisconsin. Finally, earnings appear to be higher for Talent respondents than for men in the other three surveys, though the comparisons are clearly crude at best. Assuming that the average man works 2,000 hours per year, OCG respondents earned $2.92 per hour, Census respondents $4.11 per hour, and Wisconsin respondents $3.79 per hour.

Bivariate Relationships

Table 2A presents the correlations among respondent's' characteristics in Talent, the 1962 OCG, 1970 Census, and the Wisconsin sample.

The correlations between background variables and Years of Education in the four surveys are of the same order of magnitude, as are the correlations among Years of Education, Work Experience, and Occupation. The correlation between education and various earning measures is larger in Talent.

There is little evidence that the restricted standard deviation of Years of Education in the Wisconsin sample lowered its correlations relative to Talent.

The intervening social-psychological variables predict the dependent variables better in the Wisconsin than Talent sample. But they are sometimes more, sometimes less, dependent on parental social status. Correlations between the social-psychological variables and earnings are sometimes higher in Wisconsin, sometimes Talent.

The correlations shown in Table 2A estimate the linear relationship between various respondent characteristics. They can be used with the standard deviations in Table 2 to estimate bivariate regression coefficients. But these coefficients can be misleading if the relationships among respondent's characteristics are not in fact linear or homoscedastic. The remainder of this section presents a series of tables designed to test the degree of linearity and homoscedasticity in the relationship of Father's Education, Father's Occupation, Siblings, Race, Test Scores, Education, and Work Experience to five measures of success.

Father's Education. Table 3A shows the relationship of five measures of respondents' status attainment to Father's Education. This table is based on the data for all respondents. Father's Education explains more of the variance (9.8 percent) in Talent scores than in veterans AFQT scores (5.1 percent) or Kalamazoo IQ scores (7.8 percent). Nonetheless, Father's Education would probably explain more than 9.8 percent of the variance in the Talent test if this were a fully representative sample. Talent respondents were restricted on Years of Education and thus somewhat restricted on test scores. This probably lowers eta^2.

Father's Education explains only 11.6 percent of the variance in son's educational attainment. This is less than for 25-64 year old OCG men (19.8 percent) or PSID men (17.6 percent). Presumably this also reflects the educational restriction in the Talent sample, since the Talent correlations in Table 2A are higher than for similarly selected OCG men. Since highly educated fathers pass on their advantage to sons primarily through their son's educational attainment, Father's Education explained less of the variance in Occupation and the three earnings measures than it did in the OCG and PSID. Again, the Talent correlations agree very closely with the OCG correlations for men with 11 or more years of education.

Test scores and education both show slightly more variance among sons with highly educated fathers than poorly educated fathers. This probably results from the educational restrictions in the Talent sample. Eliminating men with less than eleven years of education restricts the variance in educational attainment more for sons of poorly educated fathers than for sons of well educated fathers. The same would be true for test scores. However, the educational restrictions tend to have less effect on respondent's occupation and earnings.

Table 3B presents a series of bivariate regressions for respondents with complete data on the basic variables. Since Father's Education^2 has varying signs and is always insignificant, and since the value of R^2 in equation 1 for each dependent variable is always within 0.022 of the eta^2 in Table 3A, it seems reasonable to conclude that the nonlinear effects of Father's Education are small. Consequently, nonlinear effects of Father's Education will not be included in subsequent analyses. Not having a male head of the family at home has a consistently negative effect on all outcomes, so this variable will be retained.

Father's Occupation. Table 4A shows that Father's Occupation explains 12.2 percent of the variance in respondent's test scores compared to 6.7 percent explained in the Kalamazoo study, 5.8 percent explained in the PSID, and 6.6 percent explained in the NORC Veteran's survey. Even though Father's Occupation explains more of the variance in son's test scores in the Talent survey, the Talent estimate is probably an underestimate for the effects of Father's Occupation in a fully representative sample, just as it was for Father's Education.

Father's Occupation explains 12.1 percent of the variance in respondent's education in the Talent sample. Because of the educational restrictions, this is less than the 17.3 percent explained in the OCG or the 14.5 percent explained in the PSID. For similar reasons Father's Occupation also explains less of the variance in son's occupational attainment and earnings in the Talent survey.

Table 4B presents the regression equations for Father's Occupation. Equation 2 shows that Father's Occupation^2 has varying signs and does not reach statistical significance for any of the dependent variables. R^2 for Father's Occupation in each of the simple linear equations is within 0.02 of the eta^2 in Table 4A. Consequently, Father's Occupation^2 will not be entered in subsequent analyses.

Number of Siblings. Table 5A breaks down the dependent variables by the number of siblings in the respondent's family. Table 5B presents the corresponding regression equations. Siblings explain 9.6 percent of the variance in test scores as compared to 6.0 percent in the PSID and 7.5 percent in Kalamazoo. Siblings explain less of the variance in Education, Occupation, and Earnings than in the more representative samples, probably because the Talent sample under-represents poorly educated men.

Table 5B implies that the first sibling lowers a man's test score an estimated $0.518 - (2)(0.200)(1.5) = 0.082$ points. This prediction differs from the results in Table 5A. Both tables show that additional siblings lower a man's test score. The significant negative Siblings^2 coefficient in Table 5B implies that the second sibling decreases a man's test score an estimated $0.518-(2)(0.200)(2.5)=0.482$ points while the eighth decrease it by $0.518-(2)(0.200)(8.5)=2.882$ points. Siblings^2 will be carried through into the multivariate analyses. Nonlinear effects are small for the remaining dependent variables as evidenced by insignificant Sibling^2 terms and R^2s that approximate eta^2s.

Race. Table 6 shows the dependent variables broken down by racial categories. As in the PSID, race explains a greater percentage of the variance in respondent's test scores than in other dependent variables. Non-white respondents had 1.13 standard deviations lower test scores in eleventh grade, eventually obtained 0.217 standard deviations less education, were employed at age 28 in occupations having 0.426 standard deviations less status, and were paid 0.202 standard deviations less hourly earnings. These test score results may understate the difference between whites and non-whites, if non-whites left school before 11th grade more often than whites with similar scores. The test score results may also be understated by the low response rate for non-whites.

The coefficient of variation of 0.426 for whites and 0.522 for non-whites implies that the best paid non-white workers earn a larger share of non-white earnings than the best paid white respondents earn of white earnings. Since s_{ln} does not differ greatly for whites and non-whites, the implication is that the worst paid non-white workers earn a larger share of non-white earnings when the worst paid white workers get of white earnings. One way this could happen is if the educational system excluded proportionately more non-whites than whites by eleventh grade thereby resulting in an overestimate of the poorest black workers earnings.

Test Scores. Table 8A presents breakdowns of the dependent variables by test scores, and Table 8B shows the regressions of the dependent variables on test scores. Test scores explain 28.7 percent of the variance in respondent's educational attainment at age 28 in Talent, compared to 20.3 percent in the PSID, 26 percent in Kalamazoo, and 26.4 percent for veterans aged 25-34. Similarly, test scores obtained in eleventh grade in Talent explain 21.3 percent of the variance in respondent's occupational status at age 28, compared to 12.8 percent in PSID, 15.4 percent in Kalamazoo, and 14.3 percent for veterans. However, the results are different for earnings. Test scores explain only 2.6 percent of the variance in earnings in Talent, whereas they explain 10.6 percent in PSID and 17.1 percent in Kalamazoo. This difference probably results partly from the youth of the Talent men.

The linear regressions in Table 8B imply that each 10 point increase in test scores in high school is associated with an increase in 0.9 years educational attainment at 28, 7.71 points occupational status at 28, and $0.29 hourly earnings at 28. The significant Test Score^2 coefficient in the education equation probably results from there being no respondents with less than eleven years of education in the Talent sample. If the educational system forces those with lowest test scores to drop out of school by eleventh grade, this will flatten the regression slope at the lowest test scores, thus resulting in a positive Test Score^2 term. Elimination of individuals with low educational attainment could also account for the increase in variance in education as test scores increase. Test Score^2 is not statistically significant in the equations for occupation and earnings. Consequently, it will be entered in subsequent analyses only when education is the dependent variable.

Respondent's Education. An extra year of higher education often has a greater absolute effect on a respondent's characteristics than an extra year of elementary or secondary education. 97 percent of this sample had at least twelve years of school. The estimated effects of education are thus almost entirely effects of higher education. Table 9A shows the means and standard deviations of respondent's characteristics broken down by Years of Education.

Years of Education explains 39.5 percent of the variance in respondent's occupational status at age 28, compared to 40.6 percent in the OCG, and 42.9 percent in the PSID.

Years of Education explains only 4.5 percent of the variance in Hourly Earnings at age 28. This is considerably less than the amounts explained in older samples; 14.98 percent in the Census, 21.3 percent in the PSID, and 16.6 percent in the OCG.

Table 9A shows that when the Census sample is restricted to 28 year olds, Years of Education explains 4.2 percent of the variance in Annual Earnings, which is quite comparable to Talent. Both the Talent and Census samples show increased earnings from high school through college graduation with little or no further increase for graduate education. It should also be noted that earnings appear somewhat more unequally distributed among highly educated respondents. The coefficients of variation for 12, 16, and 20 years of education are 0.398, 0.461, and 0.483 respectively.

The regressions shown in Table 9B attempt to fit these Years of Education functions. Equation 1 shows that each year of education implies an increase of 6.27 points in occupational status and a 3.6 percent increase in Hourly Earnings. Equation 2 for each dependent variable enters the Years of Education^2 term. This term is insignificant for Occupation but, as expected, it is significant and negative in the earning equations.

The nonlinearities can be understood more clearly from equation 3. Each year of education from grade 11 through 20 increases occupational status about 5 points, but the college graduation is worth an extra 5 points. This diploma effect is relatively small compared to other surveys.

Equation 3 for respondent's Hourly Earnings implies that Talent eleventh graders who finish high school have hourly earnings increased an estimated 0.238 + 0.476 = $0.71. This is about $1420 a year if respondents work 2,000 hours. This estimate differs quite dramatically from the results in Table 9A. This is probably because of the small numbers of men who only completed 11th grade resulting in unstable estimates in both the full and the complete data samples. Equation 3 also implies that each year of college boosts hourly earnings an estimated $0.24 which is $480 per year assuming that respondents work 2,000 hours. Graduation from college increases hourly earnings **an estimated $0.16 so the last year of college increases hourly earnings by about $0.40, or about $800 a year. Each year of graduate school only results in an additional 0.238 - 0.233 = $0.005 per hour.**

Equation 3 for Ln Hourly Earnings shows these results for graduate education in percentages of the geomean. Each year of college increases hourly earnings an estimated 4.7 percent and each year of graduate school lowers earnings by 0.47 - 0.58 = -1.1 percent. This is presumably because men with graduate education in the Talent sample have less work experience. Since completing high school never had a significant effect in the regressions just presented, the dummy variable for High School Graduation is dropped in subsequent analyses.

Respondent's Education and Work Experience. The Talent sample was all enrolled in 11th grade in 1960. Those who stayed in school had less opportunity to accumulate work experience. Years of Education and Work Experience do not correlate -1.000, however, as they would if every worker proceeded through school at the same pace without working, and had then entered the labor market and worked steadily. The correlation of Years of Education with Experience is only -0.705. This means that it is possible to separate the effects of education and experience by entering both into the regression equations. These regressions are shown in Table 10.

Controlling for Experience and Experience^2 always reduces the size of the negative coefficient for Years of Graduate School to statistical insignificance in the earnings equations. This means that the negative returns to graduate education result from highly educated respondents not having much work experience at this age.

Equation 3 implies that an extra year of experience increases occupational status by 4.17-(2) (.28) (Experience). This means that the first year of work experience increases status by 4.17 - (2)(.28)(0.50) = 3.89 points, but the effects fall to 1.09 points for the fifth year of experience. Since these coefficients reach statistical significance, they will be entered in the subsequent multivariate analyses. However, they must be interpreted with some caution, since individuals who are contributing data for the higher levels of work experience are individuals who have not reached the highest levels of educational attainment. It is always possible that the status returns to work experience for these individuals is less than for more highly educated respondents.

In the hourly earnings equation Experience has a positive and statistically significant coefficient and Experience^2 has a negative coefficient. The standard error of Experience^2 is too large to allow reliable inference, however. Thus, Equation 3 implies that earnings begin to fall relative to the national average when Experience reaches .421/(2) (.02) = 10.53 years. This prediction is almost certainly wrong. Experience^2 will not be entered in the subsequent multivariate analyses for earnings.

Multivariate Relationships

The previous sections described the effects of Race, Father's Education, Father's Occupation, Siblings, Test Scores, Education, and Experience on economic success when no other variables are controlled. This section describes the effects of these and other independent variables on status attainment when other variables are controlled. These regressions allow for those nonlinear effects that appeared significant in the bivariate regressions and for interactions among the independent variables. Both the nonlinear and interaction terms have been made uncorrelated with the corresponding linear variables. Table 19 describes the construction of the squared and interaction terms.

Determinants of Test Scores. Table 12 presents the regression equations for predicting a respondent's test score. Being white is associated with a 14.53 point test score advantage when no other variables are controlled. 10.28 points (71%) of this advantage persists when the measured background characteristics in Table 12A are controlled.

Both the linear and nonlinear terms for Siblings are also significant when other background characteristics are controlled. It is always possible, of course, that some family characteristic not available in the Talent survey (parental test score for example) is responsible for the apparent effects of family size on respondent's test score, but these data strongly imply that size per se is important.

There were ten possible two-way multiplicative interactions between the five independent variables. Equation 3 shows that only one of these interactions, White x Siblings, had a coefficient more than twice its standard error. This interaction had a positive sign, which means that the advantage of being white increases as the number of siblings increases. Or to put it the other way around, the disadvantage associated with having additional siblings is greater for blacks.

Equation 1 of Table 12A shows that measured family background characteristics account for about 20 percent of the variance in test scores. Allowing for both the nonlinear effects of Siblings and the interaction of White x Siblings only increases the explained variance in test scores an additional 2 percent.

Measured family background characteristics explain more of the variance in test scores in the Talent sample than in the PSID (18 percent) or Kalamazoo (15 percent) samples. It is considerably higher than the 8 percent explained in the Wisconsin survey. This is probably because the tests differ.

Determinants of Educational Attainment. Table 13A shows the regressions of respondent's education on his other traits. The educational advantage produced by being white disappears when family background is controlled (Equation 1). When test scores are controlled (Equations 3 and 4) being white becomes a significant disadvantage. Non-whites got 1.14 years more education than the whites from similar backgrounds and with similar test scores. This is partly because non-whites had higher grades and ambitions than the whites with similar backgrounds and test scores. Controlling these intervening variables (Equation 5) reduces the non-whites educational advantage to 0.61 years. However, since there are so few non-whites in this sample, not too much should be made of these results.

The bivariate coefficient for test scores was 0.094. Table 13A shows that this effect is 0.081 when family background is controlled. Thus, 14 percent of the apparent effect of test score on education is spurious. It is due to the association of background with test and background with educational attainment. The nonlinear effects of test scores also persist when family background is controlled.

The effect of test scores on educational attainment is reduced 37 percent ((.081 - .051)/.081) when Grades, Parents' Influence on Education, Friends' Educational Plans. Educational Plans, Occupational Plans, Earning Plans and Father's Occupation x Grades are controlled. This means that 37 percent of the effect of test scores on educational attainment operates through these characteristics.

The coefficients of Grades, Friend's Educational Plans, Educational Plans, and Occupational Plans were all significant.

Eleventh graders friends educational plans were more important than the educational plans their parents had for them. However, 11th graders estimates of the amount of education their parents want them to have may not capture much of the parent's influence. Finally, eventual educational attainment was more highly associated with occupational plans than with the amount of money the 11th graders hoped to earn. As we shall see, their occupational plans are probably more realistic than their earning plans.

I investigated the 21 possible two-way multiplicative interactions between the five background variables, Test Scores, and Grades. Only two of the 21 potential interactions had a coefficient more than twice its standard error. The effect of a Father's education on his son's education decreased in large families. And the effect of Father's Occupation was somewhat greater when the son had higher grades. It should be noted that with 21 possible interactions, two will often have coefficients more than twice their standard error by chance alone.

Table 13D examines possible interactions by splitting the sample into blue collar and white collar fathers. I did not include farm fathers. The only coefficient that differs significantly for the two samples is Father's Education. Table 13E splits the sample into respondents with test scores less than 90, between 90 and 110, and higher than 110. Having siblings decreased educational attainment significantly more when the respondents test scores were high, and the effect of test scores was significantly greater when test scores were high. This latter finding reflects the nonlinear effects of test scores described earlier.

Determinants of Occupational Status. Table 14A presents a series of regressions showing the determinants of respondent's occupational attainment at age 28. The bivariate correlation between White and Occupation of .076 implies that whites had an 8.35 point occupational status advantage over blacks and other minorities at age 28. Equation 1 of Table 14A shows that differences in measured background characteristics explain about half this advantage. Controlling test scores, blacks actually have an advantage over whites. This is because they get more schooling than whites with similar scores. Controlling schooling, whites have a slight advantage.

The bivariate effect of Test Scores on Occupation is 0.771 and the nonlinear effect is not significant (see Table 8B). Equation 2 of Table 14A shows that 12 percent of this effect is spurious, due to the association of background characteristics with test score and with occupation. Part of the effect of Test Scores is associated with the six intervening social psychological characteristics measured during eleventh grade. Controlling all six of these characteristics (equation 4) reduces the effect of Test Scores by ((0.677-0.450)/0.677)=33.5 percent. This means that about 33.5 percent of the effect of Test Scores results from its association with these characteristics, possibly because Test Scores influence them or they influence test scores. Part of the effect of Test Scores also depends on its association with Education. Controlling Education (equation 5) reduces the coefficient for Test Scores an additional (0.450-0.244)/0.677=30.4 percent below the level with only background characteristics controlled. When both the intervening eleventh grade characteristics and Education are controlled (equation 6), the effect of Test Scores is reduced an additional (0.244-0.198)/0.677=6.8 percent below its value when only background is controlled. Controlling additional characteristics (Equation 9) does not affect the coefficient of Test Scores.

Test Scores still retain a direct influence on Occupation which is 29.2 percent of the effect with background control. A similar direct effect of test scores is found in the Wisconsin study.

The bivariate effect of Years of Education implied that each additional year of education through college increased status 5.11 points. College Graduation boosted this an additional 5.37 points. Years of Graduate School did not reach significance, thus each additional year of graduate school had the same effect as each year of college. Controlling for differences in men's background characteristics and test scores (equation 5) reduced the effect of Years of Education about 1-(4.25/5.11)=17 percent. College Graduation no longer is significant. Controlling all the intervening characteristics reduces the coefficient for Years of Education (equation 6) only an additional (4.25-3.93)/5.11=6.2 percent, and controlling for Experience and Experience^2 reduced it another (3.93-3.25)/5.11=13.3 percent. Individuals who manage to get a lot of education thus manage to end up in high status occupations, regardless of their test scores, grades, or other social-psychological characteristics measured by Talent. These data do not offer much support for the view that the correlation of education with occupational status arises because non-cognitive traits are correlated with both education and occupation.

Of the six social-psychological variables, Table 14A shows that Grades, Friends' Educational Plans, and Education Plans were all positively associated with occupational status after background and test scores were controlled (equation 4). When Education was controlled, the effects of each of these variables virtually disappeared, which suggests that their effects on occupational status resulted from their effects on education. That is, individuals who differed in, say, grades but did not differ in educational attainment did not differ in later occupational attainment.

I investigated the 10 possible interactions between the 5 background variables, the 3 possible interactions between Test Scores, Grades, and Years of Education, and the 15 possible interactions between the five background variables and Test Scores, Grades, and Years of Education. Only two had a coefficient more than twice its standard error. Test Score had a smaller effect when respondents were white, and Years of Education had a smaller effect for sons of high status fathers. It should be pointed out again, however, that with 28 possible interactions one will be expected to reach significance at 0.05 by chance. There was no Test Score x Years of Education interaction. Those who believe that higher education should be given primarily to those individuals with high test scores often argue that individuals with high test scores will benefit more from additional education. The non-significant Test Score x Years of Education interaction offers no support for this view, at least for occupational attainment at age 28.

Table 14D splits the sample into blue collar and white collar fathers. Table 14E splits the sample into individuals with test scores less than 90, between 90 and 110, and greater than 110. None of the coefficients differed significantly for the samples in either table.

Determinants of Ln Hourly Earnings. Table 16A presents the determinants of Ln Hourly Earnings. The 0.017 correlation between Race and Ln Hourly Earnings implies that whites have a (.017)(.396/.216)=311 percent earnings advantage over non-whites with no other characteristics controlled. Controlling differences in measured background, blacks exceed whites by an estimated 1.38 percent (Equation 1). This happens even though blacks have lower test scores than whites with the same background. Controlling Test Score, blacks still have an advantage (Equation 2), partly because blacks with the same background and test scores as whites get more education and are in higher status occupations than whites. But controlling even Education and Occupation (Equation 7), blacks have an advantage.

Each point increase in Test Score was associated with a 0.6 percent increase in the geometric mean of Earnings (Table 8B). Approximately 1-(0.455/0.6) =24 percent of the apparent affect is spurious, due to the association of measured background characteristics with test score and with Earnings. Part of the effect of Test Score depends on the six social-psychological characteristics measured in 11th grade. Controlling all of them reduced the effect of Test Score 1-(0.00293/0.00455) =35.6 percent. Part of the effect operates through Education. Controlling for Education (Equation 5) reduces the effect of Test Score an additional (.00293-0.00200)/0.00455=20.4 percent. Controlling Experience and Occupation (Equation 7) reduces the effects of Test

Score an additional (0.00200-0.00152)/0.00455=10.5 percent. With these variables controlled, each point increases in Test Score results in only a 0.15 percent increase in Earnings. The coefficient of Test Score is less than twice its standard error. Equations 5, 6, and 7 imply that young workers who do not convert their test score advantage into more education or higher status occupations will not have very much higher earnings. This finding also occurred in the Wisconsin study. The results imply that standardized tests measure skills useful in getting through school and into occupations but do not pay off once this is accomplished.

The bivariate coefficient for Years of Education was 0.051 (see Table 10). Controlling differences in family background and test scores (equation 4) reduces this coefficient about 1-(0.0376/0.051)=26 percent. When the social=psychological variables are also controlled (Equation 5) the coefficient for Years of Education is reduced an additional (0.0376-0.0286)/0.051=18 percent. Thus, the apparent effects of Education are reduced but not eliminated when causally prior variables are controlled. Controlling experience increased the effect of Years of Education slightly because Experience is negatively correlated with Years of Education. Controlling Occupation reduces the coefficient about an additional (0.0286-0.0269)/0.051=3 percent below its value when causally prior variables are controlled. When all variables are controlled (Equation 7), each year of education increases earnings only an additional 2.7 percent. The coefficient for Years of Education is less than twice its standard error. Equation 7 implies that individuals who differ in Education, but who are alike in other respects, will not differ much in Earnings unless they also differ in work experience or are in different occupations.

Occupation affects individuals' earnings, but Equation 7 shows that Occupation at age 28 has less effect on Earnings than does Experience.

The determinants of Earnings do not appear to interact with one another. I tested the same 28 interactions as with occupational status. None was significant at the 0.05 level. The regressions for the sub-samples shown in Tables 16D and 16E also offer no strong evidence for interactions.

Determinants of Hourly Earnings. Table 15A presents the determinants of Hourly Earnings. These equations closely parallel those for Ln Hourly Earnings. R^2 for Hourly Earnings and Ln Hourly Earnings differ by only 0.002.

Determinants of Utility. The determinants of Hourly Earnings$^{1/3}$ are presented in Table 17A. These equations also closely parallel those for Ln Hourly Earnings. R^2 for Hourly Earnings$^{1/3}$ and Ln Hourly Earnings differ only by 0.002.

Table 1: Coding of Principal Questions Used in Talent Survey With Frequency of Responses For Civilian, Non-Institutional Males Not In School in 1972 (N=1369)

Variable Name	Question	Coding	Percent of Valid Cases
Race of Respondent	Race		
	White/Caucasian	1	93.7
	Black/Negro/Afro-American	0	5.0
	Oriental	0	.5
	American Indian	0	.2
	Others	0	.6
	NA (N=29)		
			100.0
Father's Education	Indicate the highest level of education your father reached.		
	None, or some grade school	4	7.8
	Completed grade school	8	16.1
	Some high school, but did not graduate	10	22.7
	Graduated from high school	12	25.5
	Vocational or business school after high school	13	5.8
	Some junior or regular college but did not graduate	14	6.9
	Graduated from regular four year college	16	9.3
	Master's degree	17	2.4
	Some work toward doctorate or professional degree	18	.9
	Completed doctorate or professional degree	20	2.7
	NA (N=247)		
			100.1
Father's Occupation	Which one of the following comes closest to describing the work of your father or male head of your household. (We coded these Responses to Duncan Scores.)		
	Workman or laborer (such as factory or mine worker, fisherman, filling station attendant, longshoreman, etc.)	7	19.0
	Private household worker (such as a servant, butler, etc.)	8	.4
	Farm or ranch owner/or manager	14	
	Farm or ranch foreman	14	10.0
	Farm or ranch worker	14	

ariable Name	Question	Coding	Percent of Valid Cases
ather's ccupation ontinued	Service worker (such as barber, beautician, waiter, etc.)	17	1.5
	Semi-skilled worker (such as factory machine operator, bus or cab driver, meat cutter, etc.)	18	7.4
	Skilled worker or foreman (such as a baker, carpenter, electrician, enlisted man in the armed forces, mechanic, plumber, plasterer, tailor, foreman in a factory or mine (but not on a farm) etc.)	31	21.2
	Protective worker (such as policeman, detective, sheriff, fireman)	39	2.3
	Clerical worker (such as bank teller, bookkeeper, sales clerk, office clerk, mail carrier, messenger, etc.)	45	2.8
	Salesman (such as real estate or insurance salesman, factory repre-representative, etc.)	49	
	Proprieter or owner (such as owner of a small business, wholesaler retailer, contractor, restaurant owner, etc.	49	13.9
	Technical worker (such as draftman, surveyor, medical or dental technician, etc.)	62	4.7
	Official (such as manufacturer, officer in a large company, banker, government official, or inspector, etc.)	66	2.2
	Manager (such as sales manager, store manager, office manager, business manager, factory supervisor, etc.)	68	8.3
	Professional (such as actor, accountant, artist, clergyman, dentist, engineer, lawyer, librarian, scientist, etc.)	75	6.4
	NA (N=214)		
			100.1

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Variable Name	Question	Coding	Percent of Valid Cases
Male Head Absent	With whom are you now living.		
	Mother and father	0	83.1
	Mother only	1	7.6
	Father only	0	1.6
	Sometimes mother, sometimes father	1	.6
	Mother and stepfather	0	2.5
	Father and stepmother	0	1.3
	Grandparents, aunt, uncle, or cousin	1	1.4
	Brother or sister	1	.7
	Foster parents	0	.2
	Someone not listed above	1	.9
	NA (N=111)		
			99.9
Siblings	What is the total number of living children in your family.		
	One	1	9.5
	Two	2	26.2
	Three	3	20.9
	Four	4	16.0
	Five	5	9.8
	Six	6	6.5
	Seven	7	3.2
	Eight	8	2.6
	Nine	9	1.6
	Ten	10	1.3
	Eleven	11	1.0
	Twelve or More	12	1.3
	NA (N=104)		
			99.9
est Score	Talent's Academic Aptitude Composite (C-002). (Scores are standardized to a mean of 100 and standard deviation of 15 for 11th grade males in Talent's 10 percent representative sample. See Flanagan, et. al. 1964, pp. 3-6 and 3-7.)	Less than 70	2.9
		71-85	13.9
		86-100	31.0
		101-115	33.1
		116-130	18.1
		Greater than 130	.9
		NA (N=85)	
			99.9

Variable Name	Question	Coding	Percent of Valid Cases
Educational Plans in 11th Grade	What is the greatest amount of education you expect to have during your life		
	I don't expect to finish high school	11	2.1
	Expect to graduate from high school	12	24.2
	Vocational, business school or junior college training	13	12.6
	Some (less than 4 years) regular college training	14	9.4
	Graduate from 4 year college	16	32.5
	Study for advanced college degrees	18	19.3
	NA (N=263)		
			100.1
Occupational Plans in 11th Grade	Mark the occupation you expect to make your career after you have completed your education. Talent used its own 36 category occupation classification. (We coded these Responses to Duncan scores.	0-9	0.0
		10-19	10.1
		20-29	0.0
		30-39	11.7
		40-49	5.1
		50-59	7.6
		60-69	11.9
		70-79	11.4
		80-89	32.2
		90-96	9.9
		NA (N=296)	
			99.9
Earning Plans in 11th Grade	If all your plans work out as they should, how much money per year would you expect to be earning twenty years after you graduate from high school.		
	$2500 or less	1750	2.3
	$2500 to 5000	3750	4.6
	$5000 to 7500	6250	14.1
	$7500 to 10000	8750	18.1
	$10000 to 12500	11250	15.6
	$12500 to 15000	13750	10.6
	$15000 to 17500	16250	8.0
	$17500 to 20000	18750	6.9
	$20000 to 22500	21250	5.0
	$22500 to 25000	23750	2.0
	$25000 or more	40000	12.8
	NA (N=225)		
			100.0

Variable Name	Question	Coding	Percent of Valid Cases
Grades	My grades in _____ have been. Average was computed for grades in Mathematics, Science, Foreign Language, History and Social Studies, and English Courses		
	All A's or equivalent	6	3.3
	Mostly A's or equivalent	5	10.9
	Mostly A's and B's or equivalent	4	25.0
	Mostly B's and C's or equivalent	3	38.1
	Mostly C's and D's or equivalent	2	20.9
	Mostly D's or below or equivalent	1	1.8
	NA (N=84)		
			100.0
Parents' Influence on Education	How much education do your parents or guardians want you to have.		
	They don't care whether I stay in high school	11	1.9
	High school only	12	12.6
	Vocational school, business school or junior college	13	14.7
	A college degree	16	58.0
	Professional or graduate school	18	12.8
	NA (N=573)		
			100.0
Friends Educational Plans in 11th grade	How much education are most of your friends planning to obtain.		
	They are planning to quit high school	11	2.8
	Complete only high school	12	25.1
	Vocational school, business school or junior college	13	12.9
	Four year college training	16	52.4
	Professional or graduate training	18	6.9
	NA (N=584)		
			100.0

Variable Name	Question	Coding	Percent of Valid Cases
Education	Did you get a high school diploma. How much college have you completed.		
	Did not finish high school	11	3.2
	Finished high school	12	43.4
	One year but less than two years of college	13	7.2
	At least two years but no bachelor's degree	15	13.1
	Bachelor's degree but no graduate work	16	12.4
	Some graduate work but no graduate degree/ Master's degree	17	16.1
	Advanced (6-year) certificate of graduate study	18	.4
	Earned a doctoral degree	20	4.1
	NA (N=9)		
			99.9
Work Experience	How many years of full-time work experience have you had since June 1961 If you have done part-time work estimate how much full-time work it is equivalent to.		
	None	0	.2
	1 year or less	1	.1
	2 years	2	1.0
	3 years	3	2.1
	4 years	4	2.9
	5 years	5	3.7
	6 years	6	7.0
	7 years	7	11.5
	8 years	8	10.7
	9 years	9	6.8
	10 years	10	10.9
	11 years	11	43.1
	NA (N=8)		
			100.1
Occupation	Did you have any paid job as of September 1, 1972. (Responses coded by Talent into job codes. We assigned these occupations Duncan scores.)	0-9	0.0
		10-14	20.6
		20-29	.3
		30-39	22.8
		40-49	4.3
		50-59	7.8
		60-69	24.0
		70-79	9.0
		80-89	7.7
		90-96	3.5
		NA (N=119)	
			100.0

Variable Name	Question	Coding	Percent of Valid Cases
Hourly Earnings	How much was your pay or other earnings (before deductions) on this job as of September 1, 1972. (Coded into $/hour)	Less than .99	.7
		1.00 - 1.99	1.7
		2.00 - 2.99	7.7
		3.00 - 3.99	18.0
		4.00 - 4.99	23.2
		5.00 - 5.99	20.5
		6.00 - 6.99	13.3
		7.00 - 7.99	6.0
		8.00 - 8.99	3.1
		9.00 - 9.99	2.1
		10.00 - 10.99	1.8
		11.00 - 11.99	.5
		12.00 - 12.99	.2
		13.00 - and above	1.1
		NA (N=162)	
			99.9

Table 2 : Means and Standard Deviations for All Non-Institutionalized Civilian Males in Talent Survey in 1972 and For Talent Respondents with Complete Data on Basic Variables: Comparisons with 1962 OCG, 1970 Census, and Wisconsin Surveys.

	N Reporting variable in the Talent survey	Means					Standard Deviations				
		All Talent Respondents	Talent Respondents With Complete Data	1962[1] OCG	1970[2] Census	Wisconsin[3]	All Talent Respondents	Talent Respondents With Complete Data	1962 OCG	1970 Census	Wisconsin
White	1340	.937	.951	.944	.912		.244	.216	.230	.285	
Father's Education	1122	11.234	11.342	9.280		10.310	3.511	3.471	3.739		3.024
Father's Occupation	1155	34.625	35.551	32.941		33.627	22.463	22.345	22.905		22.543
Male Head Absent	1258	.113	.124	.073			.317	.330	.260		
Siblings	1265	3.742	3.678	3.354			2.307	2.206	2.837		
Test Scores	1284	100.288	102.585			100.67	15.354	14.602			14.539
Average Grades	1285	3.352	3.375				1.023	1.022			
Parents' Influence on Education	796	15.219	15.302				1.926	1.535			
Friends' Educational Plans	785	14.608	14.750				2.053	1.613			
Educational Plans	1106	14.747	14.913				2.260	2.126			
Occupational Plans	1073	64.850	65.462				23.608	21.736			
Earning Plans	1144	15133	15122				10700	10136			
Years of Education	1360	14.090	14.337	13.858	13.581	13.298	2.393	2.437	2.118	2.336	1.716
Work Experience	1361	8.908	8.819	7.125	7.333		2.414	2.396	2.198	2.488	
Occupation	1250	49.438	51.082	48.792		43.299	23.592	23.744	24.869		23.409
Hourly Earnings (Talent)/ Annual Earnings (Others)	1207	5.235	5.258	5846	8221	7574	2.288	2.079	2738	4341	2607
ln Hourly Earnings	1207	1.567	1.586	8.546			.438	.396	.529	.684	
Hourly Earnings 1/3	1207	1.703	1.711	17.611	19.561		.238	.220	2.730	3.622	
N		varies	839	568	934	1789	varies	839	568	934	1789

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Notes for Table 2

1. 568 men aged 27-29 from 1962 OCG survey who had 11 or more years of education, positive income, and complete data on other variables (See Jackson, Appendix B)

2. 934 men aged 27-29 from 1970 Census 1/1000 sample who had 11 or more years of education, positive earnings, and reported their Race, Education and age.

3. 1789 Wisconsin male high school graduates (class of 1957) with nonfarm background, and not enrolled in school, employed in civilian labor force in 1964, nonzero earnings 1965-67, and complete data. From Sewell and Hauser (1975), Table 4-1.

4. OCG figures cover 1961 income. Census figures cover 1969 earnings. Wisconsin figures cover 1967 earnings.

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Table 2 A: Correlations Among Variables For All Non-Institutionalized Civilian Males in Talent Survey in 1972 Having Data on Each Pair of Variables (P) and Talent Respondents with Complete Data on Basic Variables (C): Comparisons with 1962 OCG, 1970 Census, and Wisconsin Surveys.

		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. White	P	1.000										
	C	1.000										
	OCG	1.000										
	Census	1.000										
	Wisc.	1.000										
2. Father's Education	P	.019	1.000									
	C	.041	1.000									
	OCG	.063	1.000									
	Census	NA	1.000									
	Wisc.	NA	1.000									
3. Father's Occupation	P	.071	.48[illegible]	1.000								
	C	.088	.483	1.000								
	OCG	.184	.475	1.000								
	Census	NA	NA	1.000								
	Wisc.	NA	.439	1.000								
4. Male Head Absent	P	-.096	-.062	-.006	1.000							
	C	-.116	-.031	-.016	1.000							
	OCG	-.032	.059	.074	1.000							
	Census	NA	NA	NA	1.000							
	Wisc.	NA	NA	NA	1.000							
5. Siblings	P	-.127	-.128	-.142	.048	1.000						
	C	-.136	-.108	-.164	.032	1.000						
	OCG	-.246	-.237	-.206	-.062	1.000						
	Census	NA	NA	NA	NA	1.000						
	Wisc.	NA	NA	NA	NA	1.000						
6. Test Score	P	.261	.272	.319	-.176	-.257	1.000					
	C	.215	.276	.318	-.174	-.240	1.000					
	OCG	NA	NA	NA	NA	NA	1.000					
	Census	NA	NA	NA	NA	NA	1.000					
	Wisc.	NA	.246	.181	NA	NA	1.000					
7. Average Grades	P	-.084	.158	.110	-.032	-.038	.333	1.000				
	C	-.050	.150	.117	-.010	-.025	.384	1.000				
	OCG	NA	NA	NA	NA	NA	NA	1.000				
	Census	NA	NA	NA	NA	NA	NA	1.000				
	Wisc.	NA	.154	.131	NA	NA	.557	1.000				
8. Parents' Influence On Education	P	.045	.285	.260	-.162	-.122	.447	.272	1.000			
	C	.016	.239	.202	-.131	-.072	.356	.252	1.000			
	OCG	NA	NA	NA	NA	NA	NA	NA	1.000			
	Census	NA	NA	NA	NA	NA	NA	NA	1.000			
	Wisc.	NA	.248	.261	NA	NA	.345	.315	1.000			
9. Friends' Educational Plans	P	.008	.304	.303	-.076	-.122	.396	.223	.504	1.000		
	C	.027	.255	.233	-.079	-.091	.320	.212	.472	1.000		
	OCG	NA	NA	NA	NA	NA	NA	NA	NA	1.000		
	Census	NA	NA	NA	NA	NA	NA	NA	NA	1.000		
	Wisc.	NA	.237	.219	NA	NA	.288	.307	.393	1.000		

Table 2A (continued)

		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
10. Educational Plans	P	-.051	.329	.311	-.136	-.182	.514	.420	.589	.517	1.000	
	C	-.075	.328	.283	-.136	-.149	.458	.416	.508	.438	1.000	
	OCG	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.000	
	Census	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.000	
	Wisc.	NA	.270	.266	NA	NA	.426	.450	.522	.493	1.000	
11. Occupational Plans	P	-.022	.182	.207	-.043	-.101	.328	.283	.347	.310	.502	1.000
	C	.012	.170	.187	-.037	-.089	.319	.284	.296	.248	.448	1.000
	OCG	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.000
	Census	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.000
	Wisc.	NA	.227	.242	NA	NA	.428	.460	.477	.455	.755	1.000
12. Earning Plans	P	-.053	.144	.156	-.029	-.017	.065	.124	.226	.159	.206	.177
	C	-.056	.142	.170	-.064	-.003	.070	.107	.181	.090	.208	.152
	OCG	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Census	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Wisc.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
13. Years of Education	P	.053	.327	.342	-.122	-.180	.550	.352	.415	.468	.592	.366
	C	.022	.332	.332	-.122	-.204	.561	.370	.365	.375	.556	.361
	OCG	.009	.287	.362	.046	-.182	NA	NA	NA	NA	NA	NA
	Census	.055	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Wisc.	NA	.306	.290	NA	NA	.446	.512	.472	.474	.656	.580
14. Work Experience	P	.001	-.236	-.246	.105	.149	-.350	-.277	-.291	-.316	-.415	-.263
	C	.043	-.257	-.274	.127	.172	-.413	-.311	-.255	-.270	-.423	-.272
	OCG	.029	-.277	-.304	-.078	.156	NA	NA	NA	NA	NA	NA
	Census	-.051	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Wisc.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
15. Occupation	P	.103	.241	.260	-.090	-.163	.473	.279	.362	.355	.432	.298
	C	.076	.259	.264	-.094	-.157	.474	.302	.296	.310	.421	.274
	OCG	.150	.268	.337	.020	-.183	NA	NA	NA	NA	NA	NA
	Census	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Wisc.	NA	.252	.268	NA	NA	.376	.414	.358	.360	.473	.476
16. Hourly Earnings	P	.047	.115	.096	-.063	-.061	.147	.095	.148	.196	.192	.173
	C	.005	.144	.121	-.066	-.096	.203	.117	.142	.167	.206	.179
	OCG	.133	.139	.154	-.078	-.191	NA	NA	NA	NA	NA	NA
	Census	.133	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Wisc.	NA	.082	.083	NA	NA	.163	.159	.121	.091	.178	.190
17. Ln Hourly Earnings	P	.057	.127	.093	-.059	-.058	.168	.075	.154	.198	.183	.192
	C	.017	.149	.105	-.063	-.090	.203	.104	.140	.166	.196	.189
	OCG	.187	.158	.169	-.057	-.185	NA	NA	NA	NA	NA	NA
	Census	.136	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Wisc.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
8. Hourly Earnings 1/3	P	.057	.129	.100	-.064	.063	.170	.084	.156	.201	.191	.192
	C	.015	.150	.115	-.065	-.095	.209	.110	.144	.168	.203	.189
	OCG	.171	.163	.176	-.072	-.202	NA	NA	NA	NA	NA	NA
	Census	.149	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Wisc.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 2A (continued)

		12.	13.	14.	15.	16.	17.	18.
12. Earning Plans	P	1.000						
	C	1.000						
	OCG	1.000						
	Census	1.000						
	Wisc.	1.000						
13. Years of Education	P	.145	1.000					
	C	.148	1.000					
	OCG	NA	1.000					
	Census	NA	1.000					
	Wisc.	NA	1.000					
14. Work Experience	P	-.090	-.648	1.000				
	C	-.091	-.705	1.000				
	OCG	NA	-.931	1.000				
	Census	NA	-.945	1.000				
	Wisc.	NA	NA	1.000				
15. Occupation	P	.117	.624	-.428	1.000			
	C	.130	.643	-.469	1.000			
	OCG	NA	.633	-.566	1.000			
	Census	NA	NA	NA	1.000			
	Wisc.	NA	.623	NA	1.000			
16. Hourly Earnings	P.	.063	.187	-.075	.251	1.000		
	C	.072	.244	-.099	.261	1.000		
	OCG	NA	.196	-.136	.351	1.000		
	Census	NA	.154	-.125	NA	1.000		
	Wisc.	NA	.204	NA	.211	1.000		
17. Ln Hourly Earnings	P	.065	.177	-.047	.251	.905	1.000	
	C	.066	.224	-.068	.250	.932	1.000	
	OCG	NA	.152	-.100	.357	.830	1.000	
	Census	NA	.069	-.051	NA	.783	1.000	
	Wisc.	NA	NA	NA	NA	NA	1.000	
18. Hourly Earnings 1/3	P	.065	.188	-.061	.256	.961	.984	1.000
	C	.069	.237	-.083	.259	.972	.990	1.000
	OCG	NA	.178	-.118	.375	.925	.976	1.000
	Census	NA	.109	-.085	NA	.905	.965	1.000
	Wisc.	NA	NA	NA	NA	NA	NA	1.000

Table 3A Respondent Characteristics in Talent Survey By Level of Father's Education, For Civilian Non-Institutionalized Males in 1972 With Positive Earnings and Not in School Over Half Time

Level of Father's Education	Number of Respondents In Survey	Respondent's Test Score		Respondent's Education		Respondent's Duncan Score		Respondent's Hourly Earnings		Respondent's Hourly Earnings$^{\frac{1}{3}}$		Respondent's I Hourly Earning	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Total	1369	100.288	15.354	14.090	2.393	49.438	23.592	5.235	2.288	1.703	.238	1.567	.438
4	87	93.894	12.581	13.012	1.844	41.316	22.009	4.858	2.190	1.664	.219	1.504	.382
8	181	97.515	13.332	13.382	2.080	42.031	23.741	4.975	2.434	1.669	.255	1.506	.483
10	255	99.869	14.349	13.642	2.138	48.534	23.058	5.256	2.368	1.707	.230	1.578	.404
12	286	102.658	14.068	14.252	2.314	51.732	22.244	5.404	2.275	1.724	.234	1.603	.450
13	65	104.567	12.558	14.922	2.496	56.100	24.520	5.417	1.888	1.731	.214	1.622	.399
14	77	104.505	16.562	15.117	2.651	54.644	24.845	5.385	2.210	1.723	.228	1.607	.393
16	104	108.267	15.526	15.816	2.296	60.640	22.064	5.570	2.105	1.743	.229	1.641	.409
17	27	110.786	16.350	16.259	2.754	58.292	23.121	5.641	2.322	1.747	.247	1.645	.434
18	10	102.626	16.951	15.000	2.749	56.300	21.608	5.374	2.475	1.719	.246	1.600	.412
20	30	109.574	13.724	15.069	2.359	60.367	21.878	6.379	1.948	1.836	.188	1.808	.310
A	247	93.766	16.377	13.606	2.265	44.373	22.733	4.896	2.311	1.660	.253	1.485	.474
ta^2		.098		.116		.064		.017		.023		.023	
umber of Respondents eporting Dependent ariables		1284		1360		1250		1207		1207		1207	

Table 3B: Regressions of Respondent Characteristics on Father's Education for Civilian, Non-Institutionalized Males in Talent Survey in 1972 With Positive Earnings, Not in School Over Half Time, and Having Complete Data on Basic Variables (N = 839)

Dependent Variable		Father's Education	Father's Education^2	Male Head Absent	Constant	R^2	SD. of Residuals
		Unstandardized Coefficient (and Standard Error) of Independent Variables					
Respondent's Test Score	(1)	1.158 (.140)			89.455	.076	14.047
	(2)	[1.221] (.614)	[-.004] (.026)	-7.384 (1.452)	90.175	.103	13.851
Respondent's Education	(1)	.233 (.023)			11.691	.110	2.300
	(2)	[.111] (.101)	[.005] (.004)	-.817 (.240)	12.442	.124	2.285
Respondent's Occupation	(1)	1.771 (.228)			31.000	.067	22.949
	(2)	[1.508] (1.015)	[.011] (.043)	-6.187 (2.399)	33.244	.074	22.884
Respondent's Hourly Earnings	(1)	.086 (.020)			4.279	.021	2.059
	(2)	[.028] (.091)	[.002] (.003)	[-.381] (.216)	4.635	.025	2.057
Respondent's Hourly Earnings$^{1/3}$	(1)	.010 (.002)			1.603	.023	.217
	(2)	[.003] (.010)	[.0003] (.0004)	[-.040] (.023)	1.642	.027	.217
Respondent's Ln Hourly Earnings	(1)	.017 (.004)			1.393	.022	.392
	(2)	[.006] (.017)	[.0005] (.0007)	[-.069] (.041)	1.462	.026	.392

Coefficients in brackets are less than 1.96 times their standard errors.

Table 4A: Respondent Characteristics in Talent Survey By Level of Father's Occupation, For Civilian Non-Institutionalized Males in 1972 with Positive Earnings and Not in School Over Half Time

Level of Father's Occupation	Number of Respondents In Survey	Respondent's Test Score		Respondent's Education		Respondent's Duncan Score		Respondent's Hourly Earnings		Respondent's Hourly Earnings 1/3		Respondent's Ln Earnings	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Total	1369	100.238	15.354	14.090	2.393	49.438	23.592	5.235	2.288	1.703	.238	1.567	.438
Laborer (7)	220	95.416	13.640	13.288	1.976	43.180	22.837	4.983	2.043	1.683	.203	1.541	.352
Private House-hold Workers (8)	5	90.543	12.479	12.200	.447	31.000	14.000	6.146	2.618	1.804	.247	1.749	.401
Farmers (14)	115	93.535	15.905	13.496	2.217	43.385	25.469	4.825	2.370	1.647	.269	1.456	.510
Service Workers (17)	17	98.931	12.120	13.813	2.664	43.600	26.784	5.520	3.226	1.721	.286	1.594	.467
Semi-Skilled Workers (18)	86	99.831	12.150	13.212	1.934	44.397	22.158	5.411	2.701	1.719	.247	1.597	.412
Skilled Workers (31)	245	101.873	13.210	13.947	2.240	49.204	20.958	5.192	2.002	1.702	.232	1.562	.477
Protective Worker (39)	26	98.901	13.650	13.538	2.064	47.240	26.928	5.619	1.763	1.756	.195	1.672	.344
Clerical Worker (45)	32	106.254	12.222	14.094	2.115	53.367	22.851	5.476	1.733	1.745	.179	1.655	.304
Salesman (49)	160	106.117	12.637	15.157	2.310	55.579	24.877	5.610	2.638	1.738	.264	1.623	.482
Technical Worker (62)	54	108.277	10.768	15.283	2.365	60.157	19.221	6.076	2.875	1.788	.258	1.713	.427
Official (66)	25	102.897	19.129	16.080	2.971	55.760	24.818	5.255	2.152	1.705	.247	1.570	.450
Manager (68)	96	107.272	14.955	14.948	2.605	57.516	21.782	5.565	2.180	1.747	.208	1.654	.354
Professional (75)	74	108.313	15.968	15.699	2.408	60.720	24.537	5.380	2.234	1.717	.251	1.598	.463
NA	214	94.094	17.743	13.615	2.317	45.791	22.302	4.843	2.201	1.658	.238	1.486	.436
Eta^2		.122		.121		.066		.021		.024		.023	
Number of Respondents Reporting Dependent Variablo		1284		1360		1250		1207		1207		1207	

Table 4B: Regressions of Respondent Characteristics on Father's Occupation for Civilian Non-Institutionalized Males in Talents Survey in 1972 With Positive Earnings Not in School Over Half Time and Having Complete Data on Basic Variables (N=839)

Dependent Variables		Father's Occupation	Father's Occupation^2	Male Head Absent	Constant	R^2	SD. of Residuals
		Unstandardized Coefficients (and Standard Errors) of Independent Variables					
Respondent's Test Score	(1)	.209 (.021)			95.161	.102	13.845
	(2)	.291 (.088)	[-.001] (.001)	-7.680 (1.436)	95.085	.132	13.629
Respondent's Education	(1)	.036 (.004)			13.049	.110	2.300
	(2)	[.023] (.015)	[.0002] (.0002)	-.839 (.241)	13.325	.125	2.284
Respondent's Occupation	(1)	.280 (.035)			41.115	.070	22.916
	(2)	[.223] (.148)	[.001] (.002)	-6.376 (2.407)	42.686	.078	22.842
Respondent's Hourly Earnings	(1)	.011 (.003)			4.858	.015	2.065
	(2)	[.021] (.013)	[-.0001] (.0002)	[-.420] (.217)	4.780	.019	2.063
Respondent's Hourly Earnings 1/3	(1)	.0011 (.0003)			1.671	.013	.219
	(2)	.002 (.001)	[-.00001] (.00002)	[-.044] (.023)	1.664	.018	.213
Respondent's Ln Hourly Earnings	(1)	.002 (.001)			1.519	.011	.394
	(2)	[.003] (.003)	[-.00002] (.00003)	[-.076] (.042)	1.510	.015	.394

Coefficients in brackets are less than 1.96 times their standard errors.

Table 5A Respondent Characteristics in Talent Survey by Number of Siblings, For Civilian Non-Institutionalized Males in 1972 With Positive Earnings and Not in School Over Half Time

Number of Siblings	Number of Respondents In Survey	Respondent's Test Score		Respondent's Education		Respondent's Duncan Score		Respondent's Hourly Earnings		Respondent's Hourly Earnings 1/3		Respondent's Ln Earnings	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Totals	1369	100.238	15.354	14.090	2.393	49.438	23.592	5.235	2.288	1.703	.238	1.567	.438
1	120	100.150	13.550	14.311	2.544	55.280	24.506	5.369	2.431	1.717	.245	1.590	.442
2	332	104.183	13.393	14.514	2.464	53.162	23.443	5.416	2.368	1.722	.243	1.600	.436
3	265	103.024	13.683	14.191	2.393	49.761	24.101	5.332	2.369	1.714	.238	1.586	.421
4	203	101.683	15.016	14.286	2.467	49.726	23.838	5.231	1.937	1.706	.232	1.569	.492
5	124	100.228	15.181	13.951	2.219	48.673	20.710	5.454	2.490	1.729	.232	1.617	.389
6	82	97.256	15.827	13.280	1.971	42.566	20.428	4.890	2.301	1.670	.210	1.517	.354
7	40	97.151	12.860	13.625	2.215	46.595	26.595	5.239	2.461	1.699	.259	1.555	.463
8	33	88.789	15.681	13.333	1.915	43.467	25.632	5.002	1.973	1.683	.217	1.539	.383
9	20	90.129	14.539	12.900	1.518	41.706	19.474	5.116	2.962	1.684	.258	1.534	.418
10 or more	46	86.934	15.275	12.756	1.734	38.524	17.698	4.798	1.958	1.657	.228	1.486	.427
NA	104	91.210	19.845	13.883	2.471	44.575	24.326	4.473	1.905	1.613	.242	1.399	.476
Eta^2		.096		.035		.030		.014		.016		.016	
Number of Respondents Reporting Dependent Variables		1284		1360		1250		1207		1207		1207	

Table 58: Regression of Respondent Characteristics on Number of Siblings For Civilian Non-Institutionalized Males in Talent Survey in 1972 With Positive Earnings, Not in School Over Half Time and Having Complete Data on Basic Variables (N=839) 1149

		Unstandardized Coefficients (and Standard Errors) of Independent Variables				
Dependent Variables		Number of Siblings	Number of Siblings^2	Constant	R^2	SD of Residuals
Respondent's Test Scores	1	-1.602 (.223)		108.478	.058	14.179
	2	[.518] (.733)	-.200 (.066)	104.357	.069	14.110
Respondent's Education	1	-.226 (.037)		15.168	.042	2.387
	2	[-.127] (.124)	[-.009] (.011)	14.976	.042	2.388
Respondent's Occupation	1	-1.691 (.368)		57.306	.025	23.454
	2	[-1.731] (1.220)	[004] (.110)	57.382	.025	23.478
Respondent's Hourly Earnings	1	-.090 (.033)		5.590	.009	2.071
	2	[.033] (.108)	[-.009] (.010)	5.409	.010	2.071
espondent's lourly arnings	1	-.009 (.003)		1.746	.009	.219
	2	[.0003] (.014)	[.0009] (.000)	1.727	.010	.219
espondent's n ourly arnings	1	-.016 (.006)		1.645	.008	.395
	2	[.0004] (.0205)	[-.002] (.002)	1.613	.009	.395

Coefficients in brackets are less than 1.96 times their standard errors.

Table 6. Respondent Characteristics in Talent Survey by Respondent's Race, For Civilian Non-Institutionalized Males in 1972 With Positive Earnings and Not in School Over Half Time

Race of Respondent	Number of Respondents in Survey	Respondent's Test Score		Respondent's Education		Respondent's Duncan Score		Respondent's Hourly Earnings		Respondent's Hourly Earnings 1/3		Respondent's Ln Earnings	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Total	1369	100.268	15.354	14.090	2.393	49.436	23.592	5.235	2.288	1.705	.238	1.567	.438
White	1255	101.517	14.587	14.122	2.404	50.252	23.495	5.255	2.237	1.706	.236	1.573	.435
Black and Others	85	85.032	16.088	13.600	2.216	40.282	24.610	4.807	2.503	1.649	.251	1.468	.448
NA	29	90.436	19.506	14.167	2.297	41.000	22.065	5.562	3.735	1.713	.319	1.560	.538
Eta^2		.074		.003		.013		.003		.003		.003	
Number of Respondents Reporting Dependent Variables		1284		1360		1250		1207		1207		1207	

Table 88 Respondent Characteristics in Talent Survey by Respondent's Test Score, for Civilian Non-Institutionalized Males in 1972 With Positive Earnings and Not in School Over Half Time

Respondent's Test Score	Number of Respondents in Survey	Respondent's Education		Respondent's Duncan Score		Respondent's Hourly Earnings		Respondent's Hourly Earnings 1/3		Respondent's Ln Earnings	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Total	1369	14.090	2.393	49.438	23.592	5.235	2.288	1.703	.238	1.567	.438
70 and below	37	12.222	1.476	28.091	20.147	4.008	1.709	1.556	.231	1.293	.471
71-85	179	12.532	1.423	31.548	17.130	4.823	2.380	1.652	.248	1.473	.453
86-100	398	13.145	1.835	43.074	22.513	4.995	2.508	1.672	.251	1.507	.471
101-115	425	14.573	2.227	55.165	21.320	5.491	2.114	1.738	.214	1.635	.372
116-130	233	16.203	2.244	64.626	20.362	5.687	2.199	1.755	.233	1.659	.432
Greater Than 130	12	18.000	2.374	69.167	22.763	5.323	2.475	1.704	.287	1.558	.526
NA	85	13.786	2.375	48.130	20.861	4.963	1.859	1.676	.228	1.520	.440
Eta^2		.287		.213		.026		.035		.036	
Number of Respondents Reporting Dependent Variables		1360		1250		1207		1207		1207	

Table 8B: Regression of Respondent Characteristics on Respondent's Test Scores for Civilian, Non-Institutionalized Males in Talent Survey in 1972 With Positive Earnings, Not in School Over Half Time, and Having Complete Data on Basic Variables (N = 839)

Dependent Variables		Unstandardized Coefficients (and Standard Errors) of Inbependent Variables				
		Respondent's Test Score	Respondent's Test Score ^{2}	Constant	R^2	SD of Residuals
Respondent's Education	1	.094 (.005)		4.738	.314	2.019
	2	-.126 (.049)	.0011 (.0003)	15.463	.330	1.997
Rdspondent's Occupation	1	.771 (.049)		-28.061	.225	20.914
	2	[.646] (.516)	[.0006] (.0026)	-21.925	.225	20.926
Respondent's Hourly Earnings	1	.029 (.005)		2.30	.041	2.037
	2	[.054] (.050)	[-.0001] (.0003)	1.061	.041	2.038
Respondent's Hourly Earnings 1/3	1	.003 (.001)		1.387	.044	.215
	2	[.007] (.005)	[-.00002] (.00003)	1.205	.044	.215
Respondent's Ln Hourly Earnings	1	.006 (.001)		1.019	.041	.388
	2	[.013] (.010)	[-.00004] (.00005)	.646	.042	.388

Coefficients in brackets are less than 1.96 times their standard errors.

Table 9A: Respondent Characteristics in Talent Survey by Respondent's Education, For Civilian Non-Institutionalized Males in 1972 with Positive Earnings and Not in School Over Half Time

Respondent's Education	Number of Respondents in Survey	Respondent's Duncan Score.		Respondent's Hourly Earnings		Respondent's Hourly Earnings 1/3		Respondent's Ln Hourly Earnings		Annual Earnings 1970 Census[1]		
		Mean	SD	Mean	SD	Mean	SD	Mean	SD	N	Mean	SD
Totals	1369	49.438	23.592	5.235	2.288	1.703	.238	1.567	.438	934	8362.10	4548.53
11	44	30.432	19.510	5.016	2.966	1.665	.278	1.492	.472	54	7082.41	3130.59
12	590	36.377	19.102	4.724	1.878	1.650	.217	1.475	.426	456	7633.11	3326.16
13	98	45.230	18.701	5.417	2.424	1.726	.225	1.614	.378	69	8185.50	2993.48
14-15	178	49.380	20.499	5.438	2.305	1.728	.232	1.613	.407	116	9546.55	7316.13
16	169	61.852	19.252	5.889	2.715	1.773	.240	1.692	.396	124	9498.39	4873.28
17	219	67.928	14.479	5.715	2.238	1.755	.246	1.654	.464	37	9744.59	3931.85
18	6	84.667	12.160	5.800	3.299	1.726	.402	1.556	.806	78[2]	9442.31	5908.79
19 or more	56	84.444	11.464	5.798	2.802	1.756	.270	1.654	.469			
NA	9	43.429	32.557	4.062	1.929	1.555	.279	1.279	.578			
Eta^2		.395		.045		.047		.043			.0423	
Number of Respondents Reporting Dependent Variables		1250		1207		1207		1207				

Notes: 1. 1970 Census, aged 27-29 with 1 or more years of education. Positive Earnings in 1969, and reporting Race, Education, and Age (N = 934)

2. Includes men with 18 or more years of Education.

Table 9B: Regression of Respondent Characteristics on Education for Civilian Non-Institutionalized Males in Talent Survey in 1972, with Positive Earnings, Not in School Over Half Time, and with Complete Data in Basic Variables. (N = 839)

		Unstandardized Regression Coefficients (And Standard Errors) of Independent Variables							
		Years of Education	Years of Education^2	High School Graduation	College Graduation	Years of Graduate School	Constant	R^2	S.D. of Residuals
Respondent's Occupation	1	6.268 (.258)					-38.780	.414	18.189
	2	[5.771] (3.312)	[.017] (.111)				-35.175	.414	18.196
	3	5.142 (.666)		[-.590] (4.134)	5.311 (2.653)	[.824] (1.065)	-24.376	.417	18.174
Respondent's Hourly Earnings	1	.208 (.029)					2.276	.059	2.018
	2	1.122 (.366)	-.031 (.012)				- 4.354	.067	2.012
	3	.238 (.074)		[.476] (.458)	[.160] (.294)	-.233 (.118)	1.419	.067	2.013
Respondent's Hourly Earnings 1/3	1	.021 (.003)					1.404	.056	.214
	2	.136 (.039)	-.004 (.001)				.570	.066	.213
	3	.026 (.008)		[.053] (.048)	[.017] (.031)	-.030 (.012)	1.290	.067	.213
Respondent's Ln Hourly Earnings	1	.036 (.005)					1.064	.050	.387
	2	.251 (.070)	-.007 (.002)				-.495	.061	.385
	3	.047 (.014)		[.092] (.088)	[.025] (.056)	-[illegible] (.023)	.840	.061	.385

Coefficients in brackets are less than 1.96 times their standard errors.

Table 10 : Regression of Respondent Characteristics on Education for Civilian Non-Institutionalized Males in Talent Survey in 1972 with Positive Earnings, Not in School Over Half Time, and With Complete Data on Basic Variables. (N = 839)

		Unstandardized Regression Coefficients (and Standard Errors) of Independent Variables							
		Years of Education	College Graduation	Years of Graduate School	Work Experience	Work Experience^2	Constant	R^2	S.D. of Residuals
Respondent's Occupation	1	5.11 (.64)	5.37 (2.61)	[.85] (1.05)			-24.59	.417	18.16
	2	5.07 (.65)	[5.17] (2.67)	[.78] (1.06)	[-.15] (.38)		-22.52	.417	18.17
	3	4.69 (.66)	[4.75] (2.66)	[1.90] (1.15)	4.17 (1.73)	-.28 (.11)	-31.78	.422	18.11
Respondent's Hourly Earnings	1	.260 (.071)	[.107] (.290)	-.256 (.116)			1.595	.066	2.013
	2	.299 (.072)	[.281] (.294)	[-.198] (.117)	.123 (.042)		-.148	.075	2.004
	3	.273 (.073)	[.252] (.294)	[-.121] (.127)	.421 (.191)	[-.020] (.012)	-.786	.078	2.003
Respondent's Ln Hourly Earnings	1	.0510 (.0135)	[.0146] (.0554)	-.0624 (.0222)			.8735	.060	.3850
	2	.0602 (.0137)	[.0547] (.0561)	-.0490 (.0224)	.0285 (.0080)		.4698	.074	.3824
	3	.0558 (.0140)	[.0498] (.0562)	[-.0359] (.0242)	.0795 (.0365)	[-.0034] (.0023)	.3605	.076	.3821
Respondent's Hourly Earnings 1/3	1	.0286 (.0075)	.0107 (.0306)	-.0328 (.0123)			1.3101	.065	.2129
	2	.0334 (.0076)	[.0318] (.0316)	-.0257 (.0124)	.0150 (.0044)		1.0976	.078	.2116
	3	.0308 (.0078)	[.0289] (.0311)	[-.0180] (.0134)	.0448 (.0202)	[-.0020] (.0013)	1.0337	.081	.2114

Coefficients in brackets are less than 1.96 times their standard errors.

Table 12A: Regression of Test Scores on Background Characteristics of Civilian, Non-Institutionalized Males in Talent Survey in 1972 With Positive Earnings, Not in School Over Half Time, and Having Complete Data on Basic Variables (N=839)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (And Standard Errors)

	r	Equation 1		Equation 2		Equation 3	
		B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
White	.215	10.283 (2.134)	.152	9.970 (2.127)	.147	10.092 (2.114)	.149
Father's Education	.276	.615 (.149)	.146	.629 (.149)	.150	.659 (.148)	.157
Father's Occupation	.318	.134 (.023)	.205	.135 (.023)	.207	.137 (.023)	.209
Male Head Absent	-.174	-6.388 (1.381)	-.144	-6.067 (1.379)	-.137	-5.570 (1.378)	-.126
Siblings	-.240	-1.106 (.210)	-.167	-1.108 (.209)	-.167	-1.100 (.208)	-.166
Siblings^2	-.101			-.184 (.061)	-.093	-.153 (.062)	-.077
White x Siblings	.107					2.429 (.717)	.106
Constant		85.920		82.210		93.239	
R^2		.204		.213		.223	
SD of Residuals		13.067		13.005		12.923	

Table 13A: Regression of Education on Characteristics of Civilian Non-Institutionalized Males in Talent Survey in 1972 With Positive Earnings, Not in School Over Half Time, and Having Complete Data in Basic Variables (N=839)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Errors)

	r	Equation 1		Equation 2		Equation 3	
		B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
White	.022	[-.42619] (.36041)	-.038	[-.50219] (.35913)	-.044	-1.33216 (.31890)	-.118
Father's Education	.332	.15049 (.02523)	.214	.15396 (.02511)	.219	.10373 (.02222)	.148
Father's Occupation	.332	.02234 (.00396)	.205	.02126 (.00395)	.195	.01044 (.00352)	.096
Male Head Absent	-.122	-.82460 (.23328)	-.112	-.81582 (.23198)	-.110	[-.29745] (.20581)	-.040
Siblings	-.204	-.16474 (.03547)	-.149	-.16701 (.03527)	-.151	-.07700 (.03141)	-.070
Father's Education x Siblings	-.116			-.02900 (.00894)	-.102	-.02690 (.00783)	-.094
Test Score	.561					.08124 (.00511)	.487
Test Scores^2	.127						
Average Grades	.370						
Parents' Influence on Education	.365						
Friends' Educational Plans	.375						

Table 13A: Regression of Education on Characteristics of Civilian Non-Institutionalized Males in Talent Survey in 1972 With Positive Earnings, Not in School Over Half Time, and Having Complete Data in Basic Variables (n=839)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Errors)

	r	Equation 1		Equation 2		Equation 3	
		B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
Educational Plans	.556						
Occupational Plans	.361						
Earning Plans	.148						
Father's Occupation x Average Grades	.068						
Constant		12.94972		11.81513		4.91686	
R^2		.182		.193		.381	
S.D. of Residuals		2.21037		2.19782		1.92530	

Table 13A: Regression of Education on Characteristics of Civilian Non-Institutionalized Males in Talent Survey in 1972 With Positive Earnings, Not in School Over Half Time, and Having Complete Data in Basic Variables (n=839)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Errors)

	Equation 4		Equation 5		Equation 6	
	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
White	-1.13556 (.32058)	-.101	[-.60871] (.30531)	-.054	-.62366 (.30434)	.055
Father's Education	.09788 (.02210)	.139	.05551 (.02091)	.079	.05654 (.02084)	.081
Father's Occupation	.00936 (.00351)	.096	[.00614] (.00330)	.056	[.00623] (.00329)	.057
Male Head Absent	[-.34613] (.20457)	-.047	[-.12797] (.19272)	-.017	[-.09745] (.19244)	-.013
Siblings	.09301 (.03145)	-.084	-.06839 (.02944)	-.062	-.06834 (.02934)	-.062
Father's Education x Siblings	-.02881 (.00778)	-.101	-.02673 (.00725)	-.094	-.02607 (.00723)	-.091
Test Score	.08071 (.00507)	.484	.05106 (.00547)	.306	.05056 (.00545)	.303
Test Scores^2	.00092 (.00024)	.107	[.00037] (.00023)	.043	[.00028] (.00024)	.032
Average Grades			.15638 (.07090)	.066	.16097 (.07068)	.067
Parents' Influence on Education			[.01443] (.05043)	.009	[.00990] (.05029)	.006
Friends' Educational Plans			.14808 (.04526)	.098	.14673 (.04511)	.097

Table 1[illegible]: Regression of Education on Characteristics of Civilian Non-Institutionalized Males in Talent Survey in 1972 With Positive Earnings, Not in School Over Half Time, and Having Complete Data in Basic Variables (N=839)

Standardized (Beta) and Unstandardized (B) Regression Coefficients
(and Standard Errors)

	Equation 4		Equation 5		Equation 6	
	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
Educational Plans			.25614 (.04113)	.223	.26311 (.04108)	.230
Occupational Plans			.00754 (.00322)	.067	.00774 (.00321)	.069
Earning Plans			[.00001] (.00001)	.024	[.00000] (.00001)	.021
Father's Occupation x Average Grades					.00690 (.00270)	.065
Constant	13.90380		4.38128		4.43324	
R^2	.392		.481		.485	
S.D. of Residuals	1.90998		1.77111		1.76515	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 13D: Regressions of Education on Characteristics of Civilian, Non-Institutionalized Males in Talent Survey in 1972 With Positive Earnings, Not in School Over Half Time, and Having Complete Data on Basic Variables By Father's Occupation (N=763)

	Unstandardized (B) Coefficient (and Standard Error) and Correlation With Dependent Variable			
	Father Blue Collar		Father White Collar	
	B (S.E.)	Correlation	B(S.E.)	Correlation
White	-1.140 (.389)	-.019	-2.145 (.717)	-.047
Father's Education	[.033] (.031)	.081	.148 (.038)	.348
Father's Occupation	[.005] (.008)	.080	[.005] (.011)	.100
Male Head Absent	[-.102] (.252)	-.075	[-.361] (.426)	-.119
Siblings	[-.042] (.039)	-.138	-.149 (.062)	-.202
Test Score	.075 (.007)	.471	.092 (.009)	.558
Constant	7.032		5.737	
R^2	.241		.379	
SD of Residuals	1.904		1.970	
N	448		315	

Coefficients in brackets are less than 1.96 times their standard errors.

Table13E: Regression of Education on Characteristics of Civilian, Non-Institutionalized Males in Talent Survey in 1972 With Positive Earnings, Not in School Over Half Time, and Having Complete Data on Basic Variables By Test Score (N=839)

Unstandardized (B) Coefficient (and Standard Error) and Correlation With Dependent Variable

	Test Score < 90		Test Score 90-110		Test Score > 110	
	B (S.E.)	Correlation	B (S.E.)	Correlation	B(S.E.)	Correlation
White	-1.379 (.320)	-.218	[-.247] (.694)	.016	[-1.262] (.744)	-.051
Father's Education	.082 (.032)	.211	.082 (.035)	.200	.114 (.044)	.312
Father's Occupation	[.011] (.006)	.146	[.005] (.005)	.150	.017 (.007)	.327
Male Head Absent	-.511 (.271)	-.098	[-.456] (.320)	-.099	[.047] (.459)	-.016
Siblings	[-.055] (.039)	-.099	[-.049] (.049)	-.125	-.252 (.077)	-.222
Test Score	.047 (.015)	.191	.101 (.019)	.305	.126 (.023)	.353
Constant	9.187		3.229		.872	
R^2	.200		.125		.252	
SD of Residuals	1.347		2.035		2.051	
N	173		395		271	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 14A: Regression of Occupation on Characteristics of Civilian, Non-Institutionalized Males in Talent Survey in 1972 with Positive Earnings, Not in School Over Half Time, and Having Complete Data on Basic Variables (N=839)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error)

		Equation 1		Equation 2		Equation 3		Equation 4		Equation 5	
		B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
White	.076	[3.48507] (3.65970)	.032	[-3.47195] (3.41264)	-.032	[-3.36154] (3.40942)	-.031	[2.25743] (3.36833)	.021	[2.92125] (2.99253)	.027
Father's Education	.259	1.12516 (.25617)	.164	.70904 (.23800)	.104	.73694 (.23830)	.108	[.37991] (.23357)	.056	[.17663] (.20905)	.026
Father's Occupation	.264	.17237 (.04016)	.162	.08163 (.03766)	.077	.08287 (.03763)	.078	[.05598] (.03657)	.053	[.02043] (.03239)	.019
Male Head Absent	-.094	-5.71516 (2.36879)	-.079	[-1.39345] (2.20651)	-.019	[-1.15549] (2.20849)	-.016	[.26126] (2.14761)	.004	[.18655] (1.91719)	.003
Siblings	-.157	-1.13898 (.36014)	-.106	[-.39079] (.33671)	-.036	[-.30520] (.34010)	-.028	[-.25370] (.32825)	-.024	[.00826] (.29309)	.000
Test Score	.474			.67652 (.05473)	.416	.67778 (.05468)	.417	.45016 (.06040)	.277	.24351 (.05425)	.15
White x Test Score	-.045					[-.32770] (.19325)	-.052	-.43819 (.18704)	-.069		
Average Grades	.302							1.95827 (.77218)	.084		
Parent's Influence on Education	.296							[.16086] (.55586)	.010		
Friends' Educational Plans	.310							1.36064 (.50477)	.092		
Educational Plans	.421							1.78664 (.45495)	.160		
Occupational Plans	.274							[.03950] (.03596)	.036		
Earning Plans	.130							[.00010] (.00007)	.041		

[illegible] Regression of Occupation on Characteristics of Civilian, Non-Institutionalized Males in Talent Survey in 1972 with Positive Earnings, Not in School Over Half Time, and Having Complete Data on Basic Variables (N=839

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error)

	r	Equation 1 B (S.E.)	Beta	Equation 2 B (S.E.)	Beta	Equation 3 B (S.E.)	Beta	Equation 4 B (S.E.)	Beta	Equation 5 B (S.E.)	Be
Years of Education	.643									4.25269 (.65707)	.43
College Graduation	.580									[4.60946] (2.58142)	.09
Years of Graduate School	.480									[.95235] (1.03383)	.03
Father's Occupation xYears of Education	-.051										
Work Experience	-.469										
Work Experience^2	-.134										
Constant		33.77670		-24.34987		-52.19639		-98.19385		-42.53463	
R^2		.112		.250		.252		.316		.437	
S.D. of Residuals		22.44437		20.64253		20.61930		19.79766		17.90759	

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Table 14A. Regression of Occupation on Characteristics of Civilian, Non-Institutionalized Males in Talent Survey in 1972 with Positive Earnings, Not in School Over Half Time, and Having Complete Data on Basic Variables (N=839)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error)

	Equation 6		Equation 7		Equation 8		Equation 9	
	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Bet:
White	[4.44022] (3.02879)	.040	[4.33912] (3.01909)	.039	[4.44961] (3.03982)	.040	[3.86513] (3.04097)	.035
Father's Education	[.12091] (.21015)	.018	[.18441] (.21095)	.027	[.18413] (.21106)	.027	[.19281] (.21049)	.028
Father's Occupation	[.01530] (.03292)	.014	[.01050] (.03286)	.010	[.00990] (.03293)	.009	[.01004] (.03284)	.009
Male Head Absent	[.97759) (1.92535)	.014	[.82176] (1.92000)	.011	[.86939] (1.92663)	.012	(.95778] (1.92147)	.013
Siblings	[.08160] (.29511)	.008	[.08985] (.29416)	.008	[.09380] (.29457)	.009	[.08873] (.29373)	.008
Test Score	.19775 (.05704)	.122	.19812 (.05685)	.122	.19790 (.05689)	.122	.19794 (.05673)	.122
White x Test Score	-.43001 (.16765)	-.068	-.42567 (.16711)	-.067	-.42482 (.16722)	-.067	-.44252 (.16691)	-.070
Average Grades	[.89513) (.70082)	.039	[.96102] (.69900)	.041	[.94996] (.70021)	.041	[.97729] (.69830)	.042
Parent's Influence on Education	[.09895] (.49891)	.006	[.11784] (.49732)	.008	[.12409] (.49796)	.008	[.11138] (.49657)	.007
Friends' Educational Plans	[.71570] (.45615)	.049	[.72348] (.45466)	.049	[.72253] (.45492)	.049	[.69110] (.45381)	.047
Educational Plans	[.41021] (.41937)	.037	[.42871] (.41805)	.038	[.42685] (.41832)	.038	[.39236] (.41737)	.035
Occupational Plans	[.00366) (.03243)	.003	[-.00230] (.03241)	-.002	[-.00262] (.03244)	-.002	[-.00545] (.03237)	-.005
Earning Plans	[.00008] (.00006)	.033	[.00008] (.00006)	.035	[.00008] (.00006)	.035	[.00009] (.00006)	.039

Regression of Occupation on Characteristics of Civilian, Non-Institutionalized Males in Talent Survey in 1972 with Positive Earnings, Not in School Over Half Time, and Having Complete Data on Basic Variables (N=839)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Error)

	Equation 6 B (S.E.)	Beta	Equation 7 B (S.E.)	Beta	Equation 8 B (S.E.)	Beta	Equation 9 B (S.E.)	Beta
Years of Education	3.93374 (.66647)	.404	3.60535 (.68678)	.370	3.56986 (.68590)	.366	3.25093 (.69691)	.334
College Graduation	[4.26265] (2.56844)	.087	[4.56795] (2.56283)	.093	[4.39757] (2.61728)	.090	[4.08173] (2.61313)	.083
Years of Graduate School	[.91190] (1.03998)	.035	[1.82317] (1.09710)	.070	[1.77174] (1.10905)	.068	2.75887 (1.18050)	.106
Father's Occupation xYears of Education			-.03094 (.01220)	-.070	-.03117 (.01223)	-.071	-.03048 (.01220)	-.069
Work Experience					[-.12223] (.37618)	-.012	[-.19170] (.37622)	-.019
Work Experience^2							-.26092 (.10918)	-.069
Constant	- 91.84985		-105.276		-103.74878		-112.209	
R^2	.453		.457		.457		.461	
S.D. of Residuals	17.73926		17.681		17.69055		17.640	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 14D: Regression of Occupation on Characteristics of Civilian, Non-Institutionalized Males in Talent Survey in 1972 With Positive Earnings, Not in School Over Half Time, and Having Complete Data on Basic Variables By Father's Occupation (N=763)

Unstandardized (B) Coefficients (and Standard Errors) and Correlations With Dependent Variables

	Father Blue Collar		Father White Collar	
	B (S.E.)	Correlation	B (S.E.)	Correlation
White	[1.748] (2.733)	.048	[4.044] (6.727)	.007
Father's Education	[.315] (.291)	.097	[.066] (.357)	.246
Father's Occupation	[.021] (.077)	.075	[.057] (.101)	.097
Male Head Absent	[-.302] (2.386)	-.070	[2.427] (3.923)	-.066
Siblings	[.112] (.274)	-.098	[-.382] (.571)	-.162
Test Score	.292 (.074)	.420	[.182] (.095)	.431
Years of Education	5.103 (.557)	.582	4.532 (.700)	.531
Years of $Education^2$	[.013] (.195)	-.191	[.082] (.155)	.224
Work Experience	[.004] (.502)	-.345	[-.838] (.639)	-.525
Constant	-55.355		-13.305	
R^2	.368		.414	
SD of Residuals	17.982		17.917	
N	448		315	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 14E: Regression of Occupation on Characteristics of Civilian, Non-Institutionalized Males In Talent Survey in 1972 With Positive Earnings, Not in School Over Half Time, and Using Complete Data on Basic Variables By Test Scores (N=839)

	Unstandardized (B) Coefficient (and Standard Error) and Correlations With Dependent Variables					
	Test Score < 90		Test Score 90-110		Test Score > 110	
	B (S.E.)	Correlation	B (S.E.)	Correlation	B (S.E.)	Correlation
White	9.521 (4.348)	.071	[3.079] (6.438)	.040	[-11.164] (6.129)	-.117
Father's Education	[.323] (.417)	.144	[.285] (.325)	.165	[.071] (.366)	.206
Father's Occupation	[.084] (.074)	.158	[.009] (.050)	.117	[.013] (.057)	.226
Male Head Absent	[6.636] (3.515)	.034	[-2.385] (2.983)	-.106	[.280] (3.743)	-.003
Siblings	[.715] (.507)	-.017	[.400] (.455)	-.062	[-1.151] (.641)	-.227
Test Score	.515 (.196)	.244	.556 (.184)	.295	[.123] (.204)	.241
Years of Education	5.698 (1.453)	.410	5.075 (.602)	.550	5.220 (.708)	.631
Years of Education^2	[.006] (.429)	-.298	[.245] (.237)	-.168	[.083] (.153)	.324
Work Experience	[.477] (.834)	-.187	[-.600] (.551)	-.373	[-.048] (.650)	-.497
Constant	-100.564		-25.532		-4.073	
R^2	.255		.330		.416	
SD of Residuals	17.212		18.777		16.677	
N	173		395		271	

Coefficients in brackets are less than 1.96 times their standard errors.

able 15A. Regression of Hourly Earnings on Characteristics of Civilian, Non-Institutionalized Males in Talent Survey With Positive Earnings, Not in School Over Half Time, and Having Complete Data on Basic Variables (N=839)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Errors)

	r	Equation 1		Equation 2		Equation 3		Equation 4	
		B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
White	.005	[-.21171] (.33433)	-.022	[-.45212] (.33539)	-.047	[-.32190] (.34365)	-.033	[-.27106] (.33557)	-.028
Father's Education	.144	.06404 (.02340)	.107	.04966 (.02339)	.083	[.03458] (.02370)	.058	[.03410] (.02344)	.056
Father's Occupation	.121	[.00534] (.00367)	.057	[.00221] (.00370)	.024	[.00011] (.00372)	.001	[.00089] (.00369)	.009
Male Head Absent	-.066	[-.38704] (.21640)	-.061	[-.23769] (.21686)	-.038	[-.15674] (.21839)	-.025	[-.18373] (.21499)	-.029
Siblings	-.096	.07145 (.03290)	-.076	[-.04560] (.03309)	-.048	[-.03681] (.03314)	-.039	[-.03559] (.03287)	-.037
Test Scores	.203			.02338 (.00538)	.164	.01263 (.00617)	.089	[.01142] (.00608)	.080
Average Grades	.117					[-.00186] (.07853)	-.0009		
Parents' Influence on Education	.142					[.00996] (.05706)	.007		
Friends' Educational Plans	.167					[.09346] (.05134)	.073		
Educational Plans	.206					[.04010] (.04663)	.041		
Occupational Plans	.179					.00803 (.00365)	.084		
Earning Plans	.072					[.00000] (.00001)	.024		
Years of Education	.244							.19523 (.07368)	.228
College Graduation	.225							[.07950] (.28947)	.018

Table 15A: Regression of Hourly Earnings on Characteristics of Civilian, Non-Institutionalized Males in Talent Survey With Positive Earnings, Not in School Over Half Time, and Having Complete Data on Basic Variables (N=839)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Errors)

	r	Equation 1		Equation 2		Equation 3		Equation 4	
		B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
Years of Graduate School	.126							-.24468 (.11593)	-.106
Work Experience	-.099								
Occupation	.261								
Constant		4.85389		2.84520		1.41405		1.34656	
R^2		.033		.055		.079		.077	
S.D. of Residuals		2.05041		2.02847		2.01123		2.008	

Table 15A: Regression of Hourly Earnings on Characteristics of Civilian, Non-Institutionalized Males in Talent Survey With Positive Earnings, Not in School Over Half Time, and Having Complete Data on Basic Variables (N=839)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Errors)

	Equation 5		Equation 6		Equation 7	
	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
White	[-.25374] (.34363)	-.026	[-.38161] (.34366)	-.039	[-.44076] (.34159)	-.046
Father's Education	[.02827] (.02370)	.047	[.02907] (.02355)	.048	[.02778] (.02339)	.046
Father's Occupation	[-.00031] (.00372)	-.003	[.00034] (.00370)	.003	[.00015] (.00368)	.002
Male Head Absent	[-.13915] (.21755)	-.022	[-.19741] (.21692)	-.031	[-.20351] (.21536)	-.032
Siblings	[-.03240] (.03390)	-.034	[-.03723] (.03292)	-.039	[-.03679] (.03268)	-.039
Test Scores	[.00718] (.00646)	.050	[.00746] (.00642)	.052	[.00463] (.00642)	.033
Average Grades	[-.00133] (.07918)	-.001	[.01193] (.07879)	.005	[.00106] (.07828)	.001
Parents' Influence on Education	[.01245] (.05692)	.009	[.00517] (.05661)	.003	[.00367] (.05620)	.003
Friends' Educational Plans	[.07149] (.05160)	.055	[.07240] (.05128)	.056	[.06327] (.05098)	.049
Educational Plans	[.01121] (.04757)	.011	[.01346] (.04728)	.013	[.00911] (.04696)	.009
Occupational Plans	[.00682] (.00366)	.071	[.00715] (.00364)	.074	[.00707] (.00361)	.074
Earning Plans	[.00001] (.00001)	.024	[.00000] (.00001)	.020	[.00000] (.00001)	.016
Years of Education	[.14535] (.07531)	.170	[.18356] (.07572)	.215	[.12939] (.07666)	.152
College Graduation	[.07843] (.28968)	.018	[.27864] (.29409)	-.064	[.21755] (.29246)	.051

Table [illegible]: Regression of Hourly Earnings on Characteristics of Civilian, Non-Institutionalized Males in Talent Survey with Positive Earnings, Not in School Over Half Time, and Having Complete Data on Basic Variables (N=839)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Errors)

	Equation 5		Equation 6		Equation 7	
	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
Years of Graduate School	[-.21478] (.11737)	-.093	[-.14758] (.11838)	.064	[-.15971] (.11757)	-.070
Work Experience			.14106 (.04224)	.162	.14248 (.04194)	.164
Occupation					.01387 (.00385)	.158
Constant	.72128		-1.07789		-.347	
R^2	.090		.102		.116	
S.D. of Residuals	2.00275		1.99050		1.976	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 16A: Regression of ln Hourly Earnings on Characteristics of Civilian, Non-Institutionalized Males in Talent Survey with Positive Earnings, Not in School Over Half Time and Having Complete Data on Basic Variables (N+839)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Errors)

	r	Equation 1		Equation 2		Equation 3		Equation 4	
		B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
White	.017	[-.01388] (.06379)	-.008	[-.06068] (.06397)	-.033	[-.02947] (.06527)	-.016	[-.03104] (.06107)	-.016
Father's Education	.149	.01415 (.00447)	.124	.01135 (.00446)	.099	.00862 (.00452)	.075	[.00878] (.00448)	.076
Father's Occupation	.105	[.00058] (.00070)	.033	[-.00003] (.00071)	-.002	[-.00037] (.00071)	-.021	[-.00022] (.00070)	.012
Male Head Absent	-.063	[-.06850] (.04129)	-.057	[-.03943] (.04136)	-.033	[-.03217] (.04152)	-.027	[-.02996] (.04105)	-.024
Siblings	-.090	-.01271 (.00628)	-.071	[-.00768] (.00631)	-.043	[-.00705] (.00360)	-.039	[-.00614] (.00628)	-.034
Test Scores	.203			.00455 (.00103)	.168	.00293 (.00117)	.108	.00262 (.00116)	.096
Average Grades	.104					[-.00470] (.01495)	-.012		
Parents' Influence on Education	.140					[-.00105] (.01077)	-.004		
Friends' Educational Plans	.166					[.01734] (.00978)	.071		
Educational Plans	.196					[.00758] (.00881)	.041		
Occupational Plans	.189					.00195 (.00070)	.107		
Earning Plans	.066					[.00000] (.00000)	.019		
Years of Education	.224							.03764 (.01407)	.231
College Graduation	.208							[.00733] (.05527)	.008

Table 10a: Regression of Ln Hourly Earnings on Characteristics of Civilian, Non-Institutionalized Males in Talent Survey with Positive Earnings, Not in School Over Half Time and Having Complete Data on Basic Variables (N=839)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Errors)

	r	Equation 1		Equation 2		Equation 3		Equation 4	
		B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
Years of Graduate School	.097							-.05983 (.02214)	-.137
Work Experience	-.068								
Occupation	.250								
Constant		1.47296		1.08195		.782		.76129	
R^2		.032		.054		.075		.074	
S.D. of Residuals		.39124		.38692		.384		.38343	

Table 16[illegible]: Regression of Ln Hourly Earnings on Characteristics of Civilian, Non-Institutionalized Males in Talent Survey with Positive Earnings, Not in School Over Half Time and Having Complete Data on Basic Variables (N=839)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Errors)

	Equation 5		Equation 6		Equation 7	
	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
White	[-.01934] (.06522)1	-.010	[-.04843] (.06506)	-.026	[-.05955] (.06467)	-.032
Father's Education	[.00756] (.00452)	.066	[.00775] (.00448)	.067	[.00750] (.00445)	.066
Father's Occupation	[-.00042] (.00071)	-.023	[-.00027] (.00070)	-.015	[-.00031] (.00070)	-.017
Male Head Absent	[-.02773] (.04136)	-.023	[-.04072] (.04113)	-.033	[-.04192] (.04084)	-.035
Siblings	[-.00633] (.00629)	-.035	[-.00740] (.00624)	-.041	[-.00732] (.00620)	-.041
Test Scores	[.00200] (.00123)	.073	[.00206] (.00122)	.075	[.00152] (.00122)	.056
Average Grades	[-.00317] (.01508)	-.008	[-.00021] (.01497)	-.001	[-.00226] (.01487)	-.006
Parents' Influence on Education	[.00033] (.01074)	.001	[-.00125] (.01066)	-.004	[-.00156] (.01058)	-.006
Friends' Educational Plans	[.01337] (.00982)	.054	[.01360] (.00974)	.055	[.01186] (.00968)	.048
Educational Plans	[.00245] (.00902)	.013	[.00292] (.00894)	.015	[.00211] (.00888)	.011
Occupational Plans	.00171 (.00070)	.094	.00179 (.00069)	.098	.00177 (.00069)	.097
Earning Plans	[.00000] (.00000)	.021	[.00000] (.00000)	.017	[.00000] (.00000)	.012
Years of Education	.02856 (.01435)	.175	.03715 (.01439)	.228	[.02690] (.01457)	.165
College Graduation	[.01009] (.05528)	.012	[.05517] (.05596)	.067	[.04362] (.05566)	.053

Table 16A: Regression of Ln Hourly Earnings on Characteristics of Civilian, Non-Institutionalized Males in Talent Survey with Positive Earnings, Not in School Over Half Time and Having Complete Data on Basic Variables (N=839)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Errors)

	Equation 5		Equation 6		Equation 7	
	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
Years of Graduate School	-.05347 (.02239)	-.122	[-.03830] (.02253)	-.087	[-.04060] (.02237)	-.093
Work Experience			.03179 (.00804)	.192	.03206 (.00798)	.194
Occupation					.00262 (.00073)	.157
Constant	.60937		.20464		.34272	
R^2	.087		.104		.118	
S.D. of Residuals	.38224		.37888		.37619	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 16D: Regression of Ln Hourly Earnings on Characteristics of Civilian, Non-Institutionali Males in Talent Survey in 1972 With Positive Earnings, Not in School Over Half Time, and Having Complete Data on Basic Variables By Father's Occupation (N=763)

Unstandardized (B) Coefficient (and Standard Errors) and Correlations With Dependent Variables

	Father Blue Collar		Father White Collar	
	B	Correlation	B	Correlation
White	[-.037] (.074)	.010	[-.145] (.151)	-.013
Father's Education	[.003] (.006)	.045	[.015] (.008)	.174
Father's Occupation	[.0006] (.002)	.023	[-.002] (.002)	-.014
Male Head Absent	[-.082] (.047)	-.094	[.023] (.088)	-.003
Siblings	[-.001] (.007)	-.036	[-.014] (.013)	-.110
Test Score	.002 (.001)	.157	[.003] (.002)	.168
Years of Education	.038 (.011)	.187	.060 (.016)	.193
Years of Education^2	[.002] (.004)	-.059	-.009 (.003)	-.116
Work Experience	.024 (.010)	-.026	.045 (.014)	-.035
Constant	1.003		-1.783	
R^2	.060		.118	
SD of Residuals	.355		.402	
	448		315	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 16E: Regression of Ln Hourly Earnings on Characteristics of Civilian, Non-Institutionalized Males in Talent Survey in 1972 With Positive Earnings, Not in School Over Half Time, and Having Complete Data on Basic Variables By Test Score (N=839)

Unstandardized (B) Coefficient (and Standard Error) and Correlations with Dependent Variables

	Test Score < 90		Test Score 90-110		Test Score > 110	
	B	Correlation	B	Correlation	B	Correlation
White	[.038] (.096)	.018	[.041] (.124)	.040	-.363 (.149)	-.134
Father's Education	[.016] (.009)	.135	[.010] (.006)	.133	[.003] (.009)	.055
Father's Occupation	[-.002] (.002)	-.037	[-.0002] (.0010)	.069	[.001] (.001)	.075
Male Head Absent	[-.034] (.078)	-.065	[-.035] (.057)	-.035	[-.048] (.091)	-.025
Siblings	[-.009] (.011)	-.081	[-.006] (.009)	-.066	[-.002] (.016)	-.020
Test Score	[.0007] (.004)	.077	[.006] (.004)	.153	[-.001] (.005)	-.020
Years of Education	[.006] (.032)	.143	.049 (.012)	.219	[.051] (.017)	.081
Years of Education^2	[-.004] (.009)	-.120	[-.005] (.005)	-.152	[-.004] (.004)	-.042
Work Experience	[-.025] (.018)	-.154	.039 (.011)	.011	.046 (.016)	.044
Constant	.513		-1.292		.079	
R^2	.056		.101		.067	
SD of Residuals	.381		.362		.405	
N	173		395		271	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 17A: Regression of Hourly Earnings $^{1/3}$ on Characteristics of Civilian, Non-Institutionalized Males in Talent Survey in 1972 with Positive Earnings, Not in School Over Half Time, and Having Complete Data on Basic Variables (N=839)

Standardized (Beta) and Unstandardized ([illegible]) Regression Coefficients (and Standard Errors)

	r	Equation 1		Equation 2		Equation 3		Equation 4	
		B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
White	.015	[-.01088] (.03533)	-.011	[-.03740] (.03541)	-.037	[-.01861] (.03614)	-.018	[-.01957] (.03543)	-.019
Father's Education	.150	.00759 (.00247)	.120	.00601 (.00247)	.095	[.00444] (.00250)	.070	[.00446] (.00248)	.070
Father's Occupation	.115	[.00043] (.00039)	.044	[.00008] (.00039)	.009	[.00010] (.00039)	-.011	[-.00003] (.00039)	-.003
Male Head Absent	-.065	[-.03984] (.02287)	-.060	[-.02337] (.02289)	-.035	[-.01913] (.02299)	-.029	[-.01780] (.02270)	-.026
Siblings	-.095	-.00741 (.00348)	-.074	[-.00456] (.00349)	-.046	[-.00422] (.00349)	-.042	[-.00361] (.00347)	-.036
Test Score	.209			.00258 (.00057)	.171	.00164 (.00065)	.109	.00141 (.00064)	.093
Average Grades	.110					[-.00160] (.00828)	-.007		
Parents' Influence on Education	.144					[-.00054] (.00596)	-.004		
Friends' Educational Plans	.168					[.00927] (.00542)	.068		
Educational Plans	.203					[.00485] (.00488)	.047		
Occupational Plans	.189					.00103 (.00039)	.102		
Earning Plans	.069					[.00001] (.00001)	.020		
Years of Education	.237							.02120 (.00778)	.235
College Graduation	.221							[.00680] (.03057)	.014

Table 17A: Regression of Hourly Earnings$^{1/3}$ on Characteristics of Civilian, Non-Institutionalized Males in Talent Survey in 1972 with Positive Earnings, Not in School Over Half Time, and Having Complete Data on Basic Variables (N=839)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Errors)

	r	Equation 1		Equation 2		Equation 3		Equation 4	
		B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
Years of Graduate School	.111							-.03143 (.01224)	-.129
Work Experience	-.083								
Occupation	.259								
Constant		1.65191		1.43039		1.26156		1.25693	
R^2		.034		.057		.078		.079	
S.D. of Residuals		.21670		.21419		.21257		.21204	

Table 17A: Regression of Hourly Earnings$^{1/3}$ on Characteristics of Civilian, Non-Institutionalized Males in Talent Survey in 1972 with Positive Earnings, Not in School Over Half Time, and Having Complete Data on Basic Variables (N=839)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Errors)

	Equation 5		Equation 6		Equation 7	
	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
White	[-.01256] (.03608)	-.012	[-.02800] (.03603)	-.027	[-.03423] (,03581)	-.034
Father's Education	[.00379] (.00250)	.059	[.00389] (.00248)	.061	[.00375] (.00246)	.059
Father's Occupation	[-.00014] (.00039)	-.014	[-.00006] (.00039)	-.006	[-.00008] (.00039)	-.008
Male Head Absent	[-.01650] (.02288)	-.024	[-.02340] (.02277)	-.035	[-.02407] (.02261)	-.036
Siblings	[-.00372] (.00348)	-.037	[-.00429] .00346	-.042	[-.00424] .00343	-.043
Test Score	[.00106] (.00068)	.070	[.00109] (.00067)	.072	[.00079] (.00067)	.053
Average Grades	[-.00113] (.00834)	-.005	[.00044] (.00829)	.002	[-.00071] (.00823)	-.003
Parents' Influence on Education	[.00017] (.00594)	.001	[-.00067] (.00590)	-.004	[-.00084] (.00586)	-.006
Friends' Educational Plans	[.00693] (.00544)	.050	[.00705] (.00539)	.051	[.00608] (.00536)	.045
Educational Plans	[.00164] (.00499)	.015	[.00189] (.00495)	.018	[.00144] (.00492)	.014
Occupational Plans	.00089 (.00039)	.084	.00093 (.00038)	.091	.00092 (.00038)	.091
Earning Plans	[.00000] (.00000)	.022	[.00000] (.00000)	.017	[.00000] (.00000)	.013
Years of Education	.01633 (.00794)	.181	.02089 (.00797)	.231	[.01515] (.00807)	.168
College Graduation	[.00818] (.03059)	.018	[.03211] (.03099)	.070	[.02564] (.03082)	.056

Table 17A: Regression of Hourly Earnings$^{1/3}$ on Characteristics of Civilian, Non-Institutionalized Males in Talent Survey in 1972 with Positive Earnings, Not in School Over Half Time, and Having Complete Data on Basic Variables (N=839)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Errors)

	Equation 5		Equation 6		Equation 7	
	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
Years of Graduate School	-.02822 (.01239)	-.116	[-.02016] (.01247)	-.083	[-.02145] (.01239)	-.089
Work Experience			.01688 (.00445)	.184	.01703 (.00442)	.186
Occupation					.00147 (.00041)	.159
Constant	1.17454		.95969		1.03698	
R^2	.091		.106		.120	
S.D. of Residuals	.21150		.20980		.20827	

Coefficients in brackets are less than 1.96 times their standard errors.

Table 19: Definition of Orthogonalized Square and Interaction Terms: Talent Complete Data Sample (N=839)

Orthogonal Term	Definition
Siblings^2	Siblings (Siblings-10.589)
Test Score^2	Test Score (Test Score-200.082)
Experience^2	Experience (Experience-15.509)
White x Siblings	White (Siblings) -4.869 (White) - .905 (Siblings)
White x Test Score	White (Test Score) -89.809 (White) - .925 (Test Score)
Father's Education x Siblings	Father's Education (Siblings) -3.726 (Father's Education) -11.003 (Siblings)
Father's Occupation x Grades	Father's Occupation (Grades) -3.447 (Father's Occupation) -37.982 (Grades)
Father's Occupation x Education	Father's Occupation (Education) -14.562 (Father's Occupation) -38.885 (Education)

Appendix I: The 1973 Kalamazoo Brothers Survey

By Michael Olneck

The Kalamazoo Brothers sample provides data on the tested cognitive ability, family background, educational attainment, and economic achievement of men who were in the sixth grade in the Kalamazoo, Michigan public schools during the years 1928 to 1950. Data on high school teachers' ratings of student personality characteristics are also available for about a third of the sample.

The Kalamazoo sample supplements larger, more representative samples in three important ways:

(1) It allows us to investigate the effects of test scores on the occupational status and earnings of middle aged workers.

(2) By providing information on sibling resemblance, it allows us to more fully assess the impact of family background on economic success than is usually possible.

(3) It allows us to more fully control family background when estimating the effects of test scores and education on occupational status and earnings than is usually possible.

The Basic Sample

The Kalamazoo, Michigan public school system has preserved the results of its ability testing program since the program's inception in 1928. During the summer of 1973, I recorded the sixth grade ability scores of every male tested between the years 1928 and 1950. I chose 1950 as the cutoff date to insure the youngest respondent would be at least thirty-five years old in 1973.[1]

I then alphabetized the records and discarded those for which there were no duplicate last names. I used school census and enrollment records to confirm siblingship. This procedure led to a potential sample of 2782 individuals from 1224 sets of brothers.

Utilizing the Kalamazoo area telephone book, the City and County directories, the County death records, and local informants, including respondents, I traced 1612 of the original 2782 individuals in the sample. 1243 of these agreed to complete follow-up telephone interviews. 152 were dead. 52 were never directly contacted for such miscellaneous reasons as illnesses, vacations, and termination of the interviewing phase of the study. 165 refused to be interviewed. This represents a refusal rate of 11.7 percent of those contacted by phone. I refer to these 1243 respondents as the "basic sample."

Variables

Table 1 lists the names, sources, and response distributions for the principal variables used in this appendix. The sources and coding of several of the variables do not correspond exactly to those for comparable variables in our other data sets, so some elaboration is required.

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[1] Two respondents in the complete data sample are younger than 35.

Race. The Kalamazoo sample is virtually all white, so no variable indicating race is included.

Test Scores. From 1928 to 1943, the Kalamazoo school system administered the Terman group test to sixth graders. After 1943, students were given the Otis test. The Terman test emphasizes verbal skills, and does not contain quantitative items. Despite this, the test is interpreted as a "general measure of brightness." The Otis test also purports to measure "general ability" and correlates highly with Wechsler-Bellevue IQ scores.[2] In the original sample, students who had taken the Terman test (N = 2075) had scores 4 points higher than students who had taken the Otis (N = 707). The standard deviation of the Terman scores in the original sample is 15.69. The standard deviation of the Otis scores is 14.08. The Otis test has historically been scaled to a lower mean than the Terman, so the difference in means does not represent a real decline in test scores after 1943.[3]

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[2] See Buros (1975).

[3] Ratcliff (1934) notes that the median score on the Otis Self-Administering Intermediate Test (Form A) was 7 points less than the median score on the Stanford-Binet individual test, but that the median score on the Terman Group Test was equivalent to the median Stanford-Binet score.

The correlations of Terman and Otis scores with background characteristics are very similar. Only the correlations involving mother's education differ significantly (r = 0.216 for the Terman vs 0.345 for the Otis). The Otis and Terman scores predict educational and economic attainment equally well. There is no evidence in the literature of consistent or significant differences between correlations involving various forms of the Otis and Terman tests and measures of school achievement such as grades or teachers ratings. (See Miller, 1924). In my data, the correlations between the Otis and the Terman tests with the overall quotient on the Metropolitan Achievement test are virtually identical. Nor do the correlations of teachers' ratings of students' personality characteristics with Otis scores differ in any systematic way from correlations with Terman scores. The correlation of final tenth grade English marks with Otis scores is, however, significantly higher than with Terman scores (0.481 vs 0.343).

There are no standard published reliabilities for either the Terman or the Otis tests. Reported reliabilities range from around 0.85 to 0.97, depending on the populations under study and the forms of the tests administered. There is no evidence in the literature that either test is consistently or significantly more reliable than the other. (See Flemming, 1925: Cattell, 1930; Ratcliff, 1934; and Buros, 1965).

Because the difference in average scores for men having taken the two tests was expected, because there is no reason to believe that the reliabilities of the tests are different, and because correlations involving the two tests were on the whole similar, I did not separate men who had taken different tests. But since the distributions of parental education, father's occupation, and family size changed over time, I could not be certain of the extent to which the difference in the average score for men who had taken the Otis test was due solely to differences in the two tests. To investigate this problem, I regressed individual test scores onto father's education, mother's education, and father's occupation, family size, and a dummy for test type. The coefficient for having taken the Otis test was -6 points. Therefore, when I defined the variable Test Score, I simply added 6 points to the scores of men who had taken the Otis test.[4]

Father's Education, Mother's Education, Respondent's Education

These variables are all coded to the exact number of years completed. Two percent of fathers, 3 percent of mothers, and 5 percent of respondents reported business, vocational, or technical training. The convention in previous appendices was to exclude such "non-academic" training from the coding of education variables. Partly because some respondents included normal school in this category, I did not follow our usual convention. I counted both years of non-academic and years of academic schooling when I coded education. I did not count on-the-job training or other non-school training.

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[4] Controlling age as well suggests an adjustment closer to 9 points. Age differences in test scores among respondents appear, however, to be due in some measure to sample biases rather than to a clear trend toward higher scores among Kalamazoo students. Since adjustments of this nature are problematic in any case, I did not take age into account when I adjusted the Otis scores.

Farm background. Because the sample was drawn from the Kalamazoo school records, and did not include men who had attended elementary school in neighboring communities, only a handful of the respondents came from farm backgrounds. Therefore, I did not construct a variable indicating farm background.

Father's occupational group. Men whose father s held jobs classified as Professional, technical, and kindred, Managers, administrators, and proprietors; Sales workers; and Clerical and kindred were coded as having white-collar fathers. These correspond to the Census detailed occupational codes 001 to 396. Men whose fathers held jobs classified as Craftsmen and kindred; Operatives (including transportation); Laborers (including farm); Farm Managers and foreman; and Service Workers were coded as having blue-collar fathers. These correspond to Census codes above 401 excluding 999.

Early Occupational Status

I asked this question somewhat differently from the OCG survey. The OCG formulation resulted in some respondents reporting on full-time jobs held during interruptions in their educations.[5] My question stressed that the answer should pertain to the job which the respondent held after completing all of his schooling.

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[5] See Duncan, Featherman, and Duncan (1972) pp. 210 to 212 for a discussion of the problem.

Annual Earnings, Total Family Income. While the wording of the questionnaire asked respondents to report an exact figure for their expected earnings and family income, I instructed the interviewers to record answers only to the appropriate dollar interval, and to encourage reluctant respondents to specify an interval when they were unwilling to name an exact figure. While this procedure results in a somewhat cruder measure of income than might be desireable, (i.e. the midpoint of each interval), it has the virtue of encouraging a higher response rate than might otherwise be obtained. The intervals I used were slightly more detailed than those used in other surveys adopting a similar approach (e.g. NORC Amalgam).

My choice of 34000 dollars as an appropriate value for men with earnings and income over 25000 dollars was based on Current Population Survey data for March, 1972.[6]

Missing Data Procedures and Definition of the Complete Data Sample

The Kalamazoo data are important both because they include test scores for middle-aged men and because the sample is comprised of sets of brothers. I adopted procedures for dealing with missing data which maximized the number of complete pairs of brothers that remained in the sample after missing data had been taken into account. These procedures were different from those employed in most earlier appendices.

Of the 1243 respondents, 916 had at least one brother who was also interviewed. Not all of these respondents answered each question in the interview. If I had retained only those pairs in which both brothers had reported fully on all items, the sample would have been reduced to 572. To avoid this, I filled in background data on one brother by using data supplied by another brother, when this was available.

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[6] See U. S. Bureau of the Census. "Money Income in 1973 of Families and Persons in the United States," Population Reports, Series P-60, No. 97. Washington, D. C.: U. S. Government Printing Office 1975, Table 66.

While brothers' reports on background items do not correlate perfectly,[7] they are equally good at predicting other traits.

For example, the correlation between a respondent's report of his own education and his report of his father's education is 0.405. The correlation of his report of his own education and his brother's report of his father's education is 0.414. These values do not differ significantly. The same is true for other outcomes and background measures. This suggests that errors in reporting background measures are not correlated with errors in reporting outcomes. I concluded that when one brother failed to report a background item, another brother's report was equally valid.[8]

Among the 916 men from sets of respondents in which two or more brothers were interviewed, there were fifteen individuals who reported earnings but did not report family income. I assumed that nonresponse on family income for those individuals was due to an interviewer's failure to record a response when family income was the same as earnings. Therefore, I simply assigned the response for earnings as the response for family income when the latter was missing.

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[7] The correlations between brothers' reports are 0.765 for Fathers Occupation, 0.777 for Fathers Education, 0.746 for Mothers Education, and 0.942 for number of siblings.

[8] In the course of interviewing the first brother to be contacted in a family, we asked the respondent to report on the educational attainments, occupations, and earnings of his other brothers who were in the sample. Unfortunately, the reports of brother's occupations and earnings are not very reliable. While the correlation between the reported and true values for brother's education appears to have been on the order of 0.92, the analogous correlations for brother's occupation and brother's earnings are only around 0.82 and 0.65 (see Olneck, 1976, Chapter 4). Therefore, I have not substituted brothers' reports of outcomes for respondents with missing data, or for men who were not interviewed.

After substituting brothers' reports for missing family background items, and assigning earnings for missing family background wherever possible, I still had 224 men with missing data. After I eliminated them, I was left with 692 men with complete data, who also had brothers with complete data. I will call these 692 brothers the "complete data sample."

Most of the analyses reported in this appendix treat the sample as a set of individuals, and ignore familial composition. Some of the analyses, however, report the degree of sibling resemblance on individual characteristics, and some estimate regressions of sibling differences. To accomplish the analysis of sibling pairs, I created a tape on which every possible pair of brothers was entered twice, their order being reversed on the second entry. (The tape was created before missing data for background measures was taken into account.) Each pair was weighted by the reciprocal of the number of times the individuals comprising the pair appeared on the tape. Most respondents came from sets in which only two brothers were interviewed. They occured only twice: once as the first brother in a pair, and once as the second brother. Each such pair was weighted by 0.500. Sets from which three brothers were interviewed yielded six pairs: AB, AC, BC, BA, CA, and CB. Each individual from such a set (A, B, C) appeared four times, so each pair was weighted by 0.250. The initial sample of pairs consisted of 686 individuals from two-brother sets, 174 individuals from three-brother sets, and 54 individuals from sets with four or more respondents.[9]

I selected the complete data sample described above from this tape.[10]

Characteristics of the Complete Data Sample

Table 2A presents the means and standard deviations for 17 variables from both the basic and complete data samples. Table 2B presents the means and standard deviations for 8 variables from the Kalamazoo complete data sample and for men aged 35 to 54 in the OCG complete data sample.[11]

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[9] The total adds to 914, and not to 916 because a programming error deleted one pair.

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[10] This means that for a small number of cases the weighting scheme is wrong. For example, if only one brother, say A, in a three-brother set reported on parental background, only four of the six possible pairs would have been included in the complete data sample: AB, AC, BA, and CA. Pairs BC and CB would have been excluded since both brothers in these pairs were missing reports on parental background. While substituting within such pairs would have been possible, I did not attempt it. The weights for the remaining pairs would have been 0.250, even though individuals B and C occur only twice. The effect of this error is to enlarge the standard errors of the within-pair regression coefficients, since the computed number of cases is too low. This makes tests of statistical significance more conservative.

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[11] My sample of OCG men aged 35 to 54 excluded men who did not report Father's Occupation even if they had no father at home. This has virtually no effect on the equations

While differences among the characteristics of the complete data, basic, and original Kalamazoo samples are not large, differences between the characteristics of the Kalamazoo sample and national samples are pronounced. Levels of socio-economic origin and adult attainment are substantially higher in the Kalamazoo sample.[12] The degree of variation in many variables is less.

The differences between the Kalamazoo and OCG samples are due, in part, to the characteristics of Kalamazoo. Kalamazoo has traditionally been an area of skilled employment. It has also had a public college (now a university) for some years.

The differences are also due, in some measure, to my sampling and follow-up procedures. By having sampled from the Kalamazoo elementary school records, I excluded men from farm origins who attended schools in neighboring communities. My follow-up procedures depended on information from local Kalamazoo sources. I did not locate potential respondents from families which had left Kalamazoo in the years following the respondent's enrollment in sixth grade, unless there were relatives still in Kalamazoo in 1973 - 1974. The fathers of such respondents may well have been less successful than the fathers of men who grew up in Kalamazoo.[13]

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[12] Because of inflation and changes in real income, comparing OCG and Kalamazoo income averages is not useful. Men in the Kalamazoo complete data sample earned about 1250 dollars more than the 1973 national average for married men 35 to 54, which was $15,500. See U. S. Bureau of the Census. "Money Income in 1973 of Families and Persons in the United States," Population Reports, Series P-60, No. 97, Washington, D. C.: U. S. Government Printing Office, 1975, Table 34.

Finally, some of the differences observed in Table 2F are due to the fact that different cohorts are being compared. The OCG respondents were surveyed eleven years earlier than the Kalamazoo respondents. The differences on parental background, educational attainment, and income are partly due to this, though not entirely.[14]

The complete data sample is only 692/1243 = 56 percent as large as the basic sample, but attrition does not seem to have introduced further biases into the univariate distributions. There is some evidence that the basic sample is brighter than the original population from which it was drawn. The average test score of those interviewed was 100.02. Men who were not contacted

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[13] This speculation assumes that respondents' fathers who left Kalamazoo were disproportionately lower status. For support, at least in the early part of the century, see Stephan Thernstrom, The Other Bostonians, Harvard University Press, 1978, pp. 38 to 44. For a contrary view which emphasizes the greater success of both out-migrants and in-migrants, see Blau and Duncan, pp. 250 to 266, and Duncan, Featherman, and Duncan, pp. 224 to 232.

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[14] For inter-cohort comparisons of a restricted OCG sample, see Duncan, Featherman, and Duncan, p. 38. The characteristics of my sample are more in line with the characteristics reported there for non-Negro men with non-farm backgrounds, aged 25 to 44. The Kalamazoo basic sample included only 21 black respondents. Only 26 respondents reported that their fathers had been engaged in farm work.

had scores which averaged 97.48. Men who were contacted, but who refused to be interviewed averaged 95.21.

Seventy percent of my respondents still lived in Kalamazoo. Twenty-three percent of the Kalamazoo respondents were managers, administrators, and proprietors compared to 11 percent of all Kalamazoo men in 1970 and 13 percent of all men 35 to 54 in nearby Lansing, Michigan.[15] This could simply mean that natives are more likely to become managers, administrators, and proprietors than are non-natives, but I found an even stronger bias for respondents who no longer lived in Kalamazoo. Men who left Kalamazoo may be unusually successful, but it seems more likely that I was unusually successful in finding managers who left Kalamazoo.

In summary, respondents in the Kalamazoo Brothers sample come from more advantaged backgrounds, and have attained greater economic success than men of comparable age in the nation as a whole. This does not necessarily mean that the relationships among the variables in the Kalamazoo data are seriously unrepresentative, but it does mean that the results of my analyses must be generalized with caution.

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[15] There are no published occupational statistics for Kalamazoo broken down by age. See U. S. Bureau of the Census. Census of Population and Housing: 1970 Census Tracts, Final Report PAC (1)-98, Kalamazoo, Michigan SMSA. Washington, D. C.: U. S. Government Printing Office, 1972, Table P-3 and Census of Population: 1970 Detailed Characteristics, Final Report PC (1)-D24, Michigan. Washington, D. C.: U. S. Government Printing Office, 1972, Table 174.

Sample Correlations (Tables 2A, 2G, 2H)

Table 2A compares the correlations among 17 variables for the basic and complete data samples. Table 2G compares the correlations among 8 variables for the OCG sample of men aged 35 to 54, and the Kalamazoo complete data sample. And Table 2H gives the correlations among siblings' characteristics for the basic and complete data samples.

The differences between the correlations in the basic and complete data samples are negligible.

In general, the correlations in the Kalamazoo sample are similar to the correlations for OCG men aged 35 to 54. There are some important differences, however. The relationships of Father's Education and Occupation to respondent's Current Occupation and Earnings are substantially lower in the Kalamazoo sample than in the OCG. The correlation between Early Occupational status and Education is substantially higher in the Kalamazoo sample.

The correlations between brothers do not change appreciably when the basic sample is pared down because of missing data. But except for the correlation between brothers' test scores, the sibling correlations for both the basic and complete data samples are based exclusively on pairs for which we managed to interview both brothers. These correlations may misstate the degree of sibling resemblance for the larger population since we may have been more successful in tracing brothers who kept in touch. Such brothers may be more alike than average. To check this possibility, I looked at respondents' estimates of their brothers' educations, occupations, and earnings. These estimates were sometimes available even when respondents' brothers had not been interviewed. Using these reports as proxies for self-reported values, I compared correlations between brothers' characteristics for pairs in which only one brother was interviewed to correlations for the complete data sample in which both brothers were interviewed.[16] The sibling correlations for pairs in which only one brother was interviewed are 0.448 for test scores, 0.491 for education, 0.206 for occupation, and 0.223 for earnings. These correlations are not significantly different from the sibling correlations in the complete data sample.

There are few data sets against which to test the representativeness of the sibling correlations in the Kalamazoo data. Jencks et. al. reported the average correlation between siblings' test scores for seven American studies using the Stanford-Binet test as 0.52. Since the reliability of an individually administered test like the Stanford-Binet is probably higher than the reliability for group tests administered by teachers, the difference between this result and the correlation of 0.469 in my data is not surprising.

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[16] In an earlier check, I found that using brothers reports for pairs in which both brothers had been interviewed did not significantly alter the sibling correlations on education, occupation, or earnings from those found using self-reports.

The correlation between a respondent's educational attainment and his report of his oldest brother's education in the OCG original data is 0.573.[17]

The correlation between the self-reported educational attainment of brothers in the NORC Brothers segment of the NORC Amalgam Survey is 0.528 (N = 150 pairs). The correlation between brothers' educational attainments in my complete data sample is 0.549.

The correlation between brothers' current occupations in my data is 0.309. Both Hodge and Hermalin report similar correlations. Hodge's result is for an unpublished national survey in which occupation was coded on the Hodge-Siegel prestige scale. Hermalin's is for the Duncan scores of a sample of men chosen initially from among the employees of a northeastern utility plant.[18]

In the NORC Brothers data, the correlation between brothers' occupations is 0.371. This result may be higher than mine because the NORC sample includes both younger and older men, and because

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[17] Duncan, Featherman, and Duncan, p. 97.

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[18] See Jencks et. al., p. 329, and Albert Hermalin (1969).

regional variations in occupational distributions would tend to inflate sibling correlations, just as they would inflate intergenerational correlations. It may, however, be higher because of sampling error.

The correlation between brothers' earnings in the Kalamazoo data is 0.237. Jencks et. al. speculate that the correlation between brothers' earnings in a nationally representative sample would be 0.15.[19]

The observed correlation in the NORC Brothers study is 0.106. If regional variations inflate sibling correlations, I would expect the actual correlation between the earnings of brothers in the Kalamazoo population to be lower than the actual correlation between the earnings of brothers in the nation as a whole. I do not know if my sample of brothers is unusually homogeneous on earnings, or if the NORC survey has substantially underestimates the true correlation between brothers' earnings. The difference between the observed correlations may simply be due to sampling error. Taking a weighted average of the two values suggests that the correlation between brothers' earnings is around 0.20 (s.e. $\simeq$ 0.08).

Bivariate Relationships

Father's Education (Tables 3A and 3B)

Table 3A shows the means and standard deviations for the characteristics of all respondents at different levels of Father's Education. Table 3B shows the results of regressions of respondents' characteristics on Father's Education, Father's Education^2, and Female Head of Household for the complete data sample.

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[19] See Jencks et. al., p. 239 fn 36.

Father's Education explains 7.8 percent of the variance in test scores among 1237 respondents in the basic sample. This is less than it explains in the Talent Academic Composite (9.8 percent), but more than that it explains in the AFQT scores of the NORC Veterans (5.1 percent). Since the tests, coding of father's education, nonresponse rates, age ranges, and selection criteria varied across the three samples, it is impossible to pinpoint the exact sources of these differences. What is striking is the universally small amount of variance in test scores that is explained by this measure of father's status, which one would expect to be strongly related to father's test scores.[20]

There is some indication in all three samples that the variation in test scores is higher for men with more highly educated fathers. The extent to which this is true, and the levels at which increased variance becomes evident vary between the samples. This suggests that heteroscedasticity may be due to sampling variations, rather than to a regular social process.

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[20] The Kalamazoo, Talent, and older samples examined by Jencks et. al. (1972) all suggest a correlation of around 0.55 between education and test scores. In a path model that assumes correlations of 0.50 between father's and sons's test scores, 0.30 between father's education and son's test score, and 0.55 between father's education and father's test score, the direct effect of father's education on son's test score is only 0.036/0.300 = 12 percent of the zero-order relationship.

A one year difference in father's education is associated with a 1.20 point difference in test scores in the Kalamazoo sample, a 1.16 point difference in the Talent sample, and a 1.25 point difference among NORC Veterans 30 to 34. The comparability of these results suggests that the effects of father's education on test scores have been pretty much constant over time, locale, and tests.

As a further check, I divided my sample into cohorts age 35 to 39, 40 to 44, 45 to 49, and 50 to 54. The coefficient of Father's Education does not differ significantly across cohorts.

My results do not agree with all other available data, however. When I looked at the effects of Father's Education on Test Scores for high school graduates in the sample of 916 men from whom the complete data sample was chosen, the coefficient was only 0.818. This is significantly lower than the coefficient of 1.23 points (t = 2.08) which Sewell and Hauser (1975) report for their sample of 1957 male Wisconsin high school graduates.

Controlling Father's Education and Father's Education^2, the absence of a father at age 16 is associated with a 7.50 point disadvantage on sixth grade test scores. In the Talent data, the absence of a father is associated with a 7.38 point disadvantage on eleventh grade test scores. These results suggest that either broken homes inhibit cognitive development or fathers with less able sons are more likely to leave home.

Father's Education explains slightly less variance (eta^2) in respondent's Education in the Kalamazoo basic sample than it does in the OCG sample. A one-year difference in father's education is associated with a 0.33 year difference in son's education in the Kalamazoo data vs 0.38 years in the OCG sample of 35 to 54 year olds, and 0.40 years for all OCG men. These results suggest that the "inheritance" of educational attainment was slightly less marked in Kalamazoo than in the nation as a whole.

The relationship between father's education and respondent's current occupation is markedly different in the Kalamazoo data. Table 3A shows that Father's Education explains only 7.4 percent of the variance in Current Occupation in the Kalamazoo data, compared to 11.3 percent in OCG. In linear equations for complete data cases, Father's Education explains 4.6 percent of the variance in Current Occupation in the Kalamazoo data, and 10.3 percent in the OCG data. The effect of a one-year difference in father's education on son's current occupation is 1.50 points in the Kalamazoo data, and 2.03 points in the OCG data. Among OCG respondents aged 35 to 54, the effect is 1.87 points. Since the squared term for father's education is positive for both the Kalamazoo and OCG samples, and since the Kalamazoo mean is higher these differences are exacerbated by taking account of non-linearity.

The effect of father's education on income is also larger in the OCG data. A one year difference in father's education raises earnings by 2.17 percent in the Kalamazoo sample vs 4.57 percent in income in the OCG.

Father's Occupation (Tables 4A and 4B)

Father's occupation explains 6.7 percent of the variance in test scores in the basic sample. The variance in test score is larger among men with high status fathers than with low status ones. Comparisons with the Talent and Veterans data do not suggest any conclusions not already suggested by the analyses of Father's Education and Test scores.

Father's Occupation explains slightly less variance in educational attainment in the Kalamazoo data than in the OCG data. However, for the complete data sample, the effect of a one point difference in Father's Occupation on educational attainment is significantly higher in the OCG data (0.075) than it is in the Kalamazoo data (0.046). The effect of Father's Occupation in the OCG data remains significantly higher even after Father's Occupation Squared is added to the equation (0.094 vs 0.026).

The effect of Father's Occupation on current occupational status is dramatically lower in the Kalamazoo data than in the OCG data. Table 4A shows that eta^2 is only 0.070 in the Kalamazoo data compared to 0.160 in the OCG. In the Kalamazoo complete data sample, a one point difference in father's occupation is associated with only a 0.224 point difference in son's current occupation. The effect in the OCG data is over twice as large. These differences do not diminish appreciably when one allows for nonlinearity.

A 1 point difference in father's occupation is associated with a 0.4 percent difference in earnings in the Kalamazoo data.

Some of the difference in the explanatory power of father's occupation is due to the fact that correlations between measures of parental background and respondent's economic attainment arise, in part, because of regional variations in occupational and earnings distributions which are absent in the Kalamazoo data. The differences may also be due to unmeasured selection biases in my sample, and to the possibility that economic attainment depended less on social origins in Kalamazoo than elsewhere.

Number of Siblings (Tables 5A and 5B)

In both the Kalamazoo and the Talent samples, men from larger families tend to have lower scores on ability tests than men from smaller families. Eta^2 is 0.075 in the Kalamazoo data vs 0.096 in the Talent data. However, R^2 in a simple linear equation for the Kalamazoo complete data sample is 0.076 compared to only 0.058 in the Talent data. This is because the correlation between test scores and family size falls from the basic sample to the complete data sample in Talent, but rises in the Kalamazoo data.

The effect on test scores of having one extra sibling is almost identical in the Kalamazoo and Talent samples. The patterns of heteroscedasticity are quite different between the two data sets, however. In the Kalamazoo data, the variance in test scores for men from smaller families tends to be greater than for men from larger families. In the Talent data, the reverse is true. This is puzzling, because men from larger families are less likely to reach the later years of high school than men from smaller families. I would have expected those that did to have been a more homogeneous group.

Family size explains comparable percentages of variance in, and exercises similar effects on, Education, Occupation and Earnings in the Kalamazoo and the OCG samples.

Age (Tables 7A and 7B)

Younger men in my sample tend to have higher test scores than older men. This is due, in part, to the fact that older men are more likely to have had poorly educated, foreign-born, or low-status fathers. It is also due to biases in my sample. Test score differences across cohorts are more pronounced among respondents than among non-respondents.[21]

Younger men also tend to have gotten more schooling than older men. This is in keeping with national trends toward higher educational attainment. However, the national trend has also been toward reduced variation in educational attainment. In the Kalamazoo data, this trend is reversed. The standard deviation of education for younger men tends to be higher than for older men.

Younger men in the Kalamazoo sample tend to have begun their careers at higher levels, to have been presently engaged in higher status jobs, and to have been earning more money than older men. Among OCG and Census respondents over 35 these same tendencies exist. Differences in occupational status are not as pronounced as in my data.[22] But there are greater differences in Earnings (or Income) by age in the Census and OCG.

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[21] The average test score for respondents aged 35 to 39 is 101.84; for non-respondents it is 100.07. The average score for respondents aged 40 to 44 is 103.49; for non-respondents it is 98.49. For respondents 45 to 49, the average score is 98.09; for non-respondents it is 95.27. For respondents 50 to 54, the average score is 99.00; for non-respondents it is 96.81. And for respondents 55 to 59, the average test score is 96.80 compared to 96.98 for non-respondents.

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[22] See Duncan, Featherman, and Duncan, pp. 267-270 for means on early occupation.

I do not know if this is because occupational shifts in the Kalamazoo area have favored younger workers during the last two decades, or whether younger respondents are less representative of Kalamazoo than my older respondents.

I suspect that the youngest cohort in my sample (i.e. 35 to 39) may be unusually successful. The earnings of the 35 to 39 year olds in my sample are virtually identical to the earnings of the 40 to 44 year olds. In the 1970 U.S. Census data, the earnings of 35 to 39 year olds are only 91 percent of the earnings of 40 to 44 year olds.

Test Scores (Tables 8A and 8B)

Both the Kalamazoo and Talent data suggest that educational attainment is more heterogeneous among men with higher scores than it is among men with lower scores. This is not true in the Veterans sample, but high scoring men with college and graduate education are underrepresented in that sample.

Both the Kalamazoo and Talent results suggest that a linear regression of education onto test scores explains about a third of the variance in educational attainment. The analagous regression in the Veterans data explain only a quarter of the variance in attainment. Again, the discrepancy is probably due to sampling differences, and not to differences in the effects of different tests. The coefficients for the regression of education onto test scores are not significantly different among the Talent, Kalamazoo, and Veterans samples.

Among the 659 high school graduates in the sample of 916 brothers from whom the complete data sample was chosen, a 1 point difference in test scores is associated with a 0.080 year difference in educational attainment, which is significantly different from the 0.052 year effect of a 1 point difference on the Henmon-Nelson test in Sewell and Hauser's Wisconsin sample (t = 4.70). This suggests that estimates of the effects of test scores on educational attainment may be sensitive to differences in tests and populations.

Jencks (Appendix G) observed that the variance in current occupation among respondents in the Veterans sample rises as test scores rise. There is no such pattern in the Talent data or in mine. The pattern does generally hold, however, for the first jobs men in the Kalamazoo sample held after finishing all of their schooling. Table 9A shows the same pattern when early occupation is related to educational attainment. I conclude that except for those at the very top, higher scoring and better educated men engage in a wide range of early occupations, while lower scoring and less well educated men are concentrated in more homogeneous, lower status jobs. Over time, men from the lower end of the test score and schooling distribution spread themselves out, while men from higher end tend toward more common occupational destinations.

A linear regression of earnings on test scores explains 13 percent of the variance in earnings for the Kalamazoo respondents, 4.1 percent for Talent respondents at age 28, and 7.9 percent for 25 to 34 year old Veterans. But for 30 to 34 year old Veterans, $R^2 = 0.123$. The differences in R^2's among the three samples thus seems to be largely due to differences in age.

It is not clear, however, that the relationship between test scores and earnings rises consistently with age. The correlation between test scores and earnings is 0.319 for respondents 35 to 39, 0.476 for those 40 to 44, 0.338 for those 45 to 49, and 0.283 for those 50 to 54. The differences among these correlations are not statistically significant, nor do the unstandardized regression coefficients of earnings on test scores differ significantly across cohorts. These results suggest that the correlation between test scores and earnings peaks in middle age, and may be higher in my sample than it would be for 25 to 64 year olds.

In the Kalamazoo data, a 1 point difference in test scores is associated with a 1.06 percent difference in earnings. The effect of a 1 point difference in AFQT on the earnings of Veterans 30 to 34 is 1.22 percent. The effect of an adjusted 1 point difference in test scores for men 35 to 44 in the PSID is 1.60 percent.[23]

For men 45 to 54, it is 1.74 percent. The difference between the results for the Panel Study and for my sample are significant. They suggest that either the PSID test measures characteristics that have more effect on earnings than the characteristics measured by the Terman and Otis tests, or that early measures of ability are imperfect proxies for adult ability.

Education (Tables 9A and 9B)

The distribution of educational attainment in the Kalamazoo sample is very different from the distribution of educational attainment in our national samples. For example, only 0.2 percent of the Kalamazoo respondents have less than an eighth grade education, compared to 16 percent of the OCG respondents. 2.2 percent of the Kalamazoo respondents have only eighth grade educations compared to 15 percent of the OCG respondents. And percent of the Kalamazoo respondents went beyond high school, compared to only 23 percent of the OCG respondents.[24]

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[23] I assumed a standard deviation of 15 for test scores in the Panel Study. I then calculated a standard deviation of test scores for each cohort by multiplying 15 times the ratio of the observed cohort standard deviation to the observed standard deviation for the whole sample.

Because of nonlinearities in the effects of schooling, we would not expect linear coefficients to be the same in samples with differences in mean education. Using Table 9A, we can, however, compare the effects of education for different attainment levels across samples.

Twelfth grade graduates in the OCG sample have a 39.34 - 29.50 = 9.84 point advantage over men with 9 to 11 years of schooling on occupational status. The comparable advantage among Kalamazoo respondents is 11.78 points, which is not significantly different from the OCG result (t = 1.84). College graduates hold somewhat more of an occupational advantage over high school graduates in the OCG than in the Kalamazoo sample (26.92 points v. 23.47 points, t = 2.07).

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[24] Data made available to me after the conclusion of our project suggest that only a small part of the discrepancy between the levels of educational attainment in the Kalamazoo and 1962 OCG samples can be attributed to differences in the timing of the surveys. In the 1973 replication of the OCG survey, 11 percent of the respondents aged 35 to 59 had less than eighth grade educations, 21 percent had only eighth grade educations, and only 28 percent had gone beyond high school. See Featherman and Hauser (1975). I am grateful to Robert Hauser for providing this information to me.

The relative earnings advantages associated with increased schooling are quite similar in the OCG and Kalamazoo samples. Twelfth grade graduates have incomes 21 percent higher than men with 9 to 11 years of school in the OCG compared to 17.4 percent more in the Kalamazoo sample. OCG college graduates have incomes 45.5 percent higher than high school graduates, and Kalamazoo college graduates earn 47.7 percent more than high school graduates.

These results suggest that differences in the coefficients for education between the Kalamazoo sample and more representative samples are due to differences in the distributions of education, and not to differences in the actual effects of education.

Years of Education, Years of Higher Education, and B.A. explain somewhat less variance in occupational status in the Kalamazoo sample than in the OCG (35.8 percent vs 40.8 percent). R^2 for Ln earnings is virtually the same in the two samples, i.e. .168 for Kalamazoo and .164 for OCG.

Education and Experience (Table 10)

The effects of experience on earnings are consistently insignificant in the Kalamazoo data. This is because the Kalamazoo sample does not include men under 30, for whom increments in experience have the greatest effect. Among the OCG respondents 35 to 54, the effect of experience is similarly trivial. The changes in Ln earnings for Kalamazoo five year cohorts are not consistently different from changes in the Census.

The effect of Experience on total family income is significantly positive. This is most likely because older men (among 34 to 59 year olds) are more likely to have wives who have entered or returned to the labor force after children have grown.

Multivariate Results

Tables 12 to 16 present a series of multivariate regression analyses for the Kalamazoo Brothers complete data sample. These analyses differ in some respects from the analyses of our other data sets. Like others, I tested the significance of various multiplicative interactions at the stage when their components entered. In the equation predicting educational attainment, for example, I tested the significance of Father's Education x Siblings after the individual background measures were entered, but before Test Score was entered. I then orthogonalized the significant interactions. But I did not actually enter the interactions until the last steps of the final equations. This means that some interactions which were significant at the stage at which they were first tested are no longer significant when actually entered.

I have also included tables which report the results of regressions of sibling differences. I created difference variables for test scores, education, early and current occupation, annual earnings, and Ln earnings by subtracting the value for one brother from the value for the other brother. Since every pair of brothers is entered on the tape twice, with the order reversed on the second entry, the mean of every difference variable is necessarily zero. The variance is four times the within-pair variance. Regressions involving difference variables yield the same coefficients as regressions based on individual deviations from the pair mean.

The coefficient of a difference variable may be interpreted as an estimate of the effect of the variable when all aspects of shared family background have been controlled. If measured background variables like father's occupation capture the total effect of background, the coefficients of the difference variable will be the same as its coefficient in equations that include measured background. If survey measures omit important aspects of family background which affect more than one outcome or which are correlated with one another, the coefficient in ordinary regressions will be biased, but the coefficient of the difference variable will not. The coefficient of the difference variable may, of course, still be biased by the omission of other relevant differences between brothers (e.g. on personality or genes) or by misspecifying the form of the equation.

Test Scores (Table 12)

Taken separately, father's education and father's occupation each explain 6.8 percent of the variance in test scores. The full array of background measures, including interaction and squared terms, explains 16.9 percent of the variance in test scores.

The effects of large families and female headed households, which I noted earlier, persists when other measures of background are controlled.

The effect of father's education on test scores is greater for the sons of American-born fathers than for the sons of foreign-born fathers. Perhaps educational differences among native-born fathers are more closely associated with father's cognitive ability than educational differences among foreign-born fathers.

The correlation between brothers' test scores is 0.469. This means that all factors associated with shared family background explain 46.9 percent of the variance in test scores. 46.9 - 16.9 = 30 percent of the variance in test scores is explained by background but not by measured background.

Educational Attainment (Table 13)

Background measures alone explain 33 percent of the variance in educational attainment. The sibling correlation on education is 0.549, which means that adding unmeasured background characteristics raises R^2 by 0.219. Measured background and test scores together explain 48.8 percent of the variance, and measured and unmeasured background plus test scores explain 60.6 percent.[25]

I argued that father's education affects test scores principally because it is associated with the unmeasured cognitive ability of fathers. However, if father's education was merely a proxy for father's test score, I would expect its effects on other outcomes to be mediated by son's test score. This expectation is not fulfilled.

The standardized coefficient of father's education on education when test score is added is 0.191/0.238 = 80 percent of the coefficient in the regression in which test score is omitted. The direct effect of having a white collar father is similarly insensitive to the inclusion of test score.

Controlling other background measures and test scores, there is a statistically significant 0.397 year educational disadvantage associated with having an American-born father. This result lends credence to the view that immigrant families disproportionately pursued advancement through education.[26]

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[25] The within-pair residual standard deviation, controlling test scores is 1.713. $1 - [1.713^2/2.730^2] = .606$.

The single most important measured determinant of educational attainment in the Kalamazoo sample is the respondent's sixth grade test score. The bivariate regression coefficient for test scores is 0.103. With measured background controlled, the coefficient is 0.077. When I control family background by regressing the difference between two brothers with respect to education on their sibling differences with respect to test scores, a 1 point difference in test scores is associated with a 0.059 year difference in educational attainment. This means that only 0.059/0.103 = 57 percent of the effect of test scores on education is independent of family background.

The effect of Father's Education on Years of Education is significantly higher among men under 45 than among 45 and over. This is true even when test score is added to the equation. It is not true in national samples, however.

Early Occupational Status (Table 14A1)

Measured background explains a quarter of the variance in early occupational status. Shared family background explains

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[26] This generalization should be treated cautiously. The educational attainments of different immigrant groups varied, and the relative advantage or disadvantage of particular groups depended on variations in time, locale, and population ethnic mix. (See Beverly Duncan and Otis Duncan, 1968. Also Michael Olneck and Marvin Lazerson, 1974.)

39.4 percent. An equation including measured background, test scores, linear and nonlinear educational terms, and appropriate squared and interaction terms explains 57.8 percent of the variance in Early Occupational status. Measured and unmeasured background, together with Education and Test scores, explain 60.0 percent.

The effects of Father's Education, White Collar father, Female head of household, and Number of Siblings on Early Occupation are almost entirely mediated by educational attainment. There is, however, a modest direct effect of Father's Occupational status. The effect of Test score is also mediated almost entirely by educational attainment.

Table 8B shows that a 1 point increase in test score is associated with a 0.61 point increase in early occupational status. Table 14A2 shows that controlling all aspects of family background shared by brothers, lowers this effect by almost half, to 0.35 points.

Table 9B shows that a one year difference in schooling is associated with a 6.24 point difference in early occupational status. Table 14.A.1 (Equation 3) shows that 5.58/6.24 = 89 percent of the effect of education on early occupational status is independent of the effects of measured background and test scores. Table 14.A.2 shows that controlling total family background and test score differences between brothers does not appreciably reduce the estimate of the direct effect of Years of Education on Early Occupation.

Current Occupational Status (Table 14A3)

Measured background alone explains 12.5 percent of the variance in Current Occupational status. Measured and unmeasured background explain 30.9 percent. Adding test scores and educational attainment to measured background raises R^2 to 0.377. Adding early occupation raises it to 0.422. Measured and unmeasured background, along with education and test scores explain 42.4 percent of the variance, and adding sibling differences on early occupation raises R^2 to .444.

Once educational attainment is added, measured background has no significant direct effects on current occupational status. 58 percent of the direct effect of test scores is also mediated by educational attainment.

Table 9B shows that a 1 year difference in schooling is associated with a 5.01 point difference in current occupational status. Table 14A1 shows that 4.26/5.01 = 85 percent of that effect persists when I control measured background and test scores. Table 14.A.2 shows, however, that when I also control unmeasured family background, a 1 year difference between brothers in educational attainment is associated with only a 3.50 point difference in current occupation. Controlling common family background and test scores does not, however, reduce the effect of holding a B.A.

Ln Earnings (Tables 16A1 and 16A2)

Measured background alone explains 8 percent of the variance in ln Earnings, but unmeasured and measured background together explain 22 percent. Measured and unmeasured background, along with Test scores and Education, , explain 29.6 percent. Adding Current Occupational status raises R^2 to .354.

Once Test scores and Education . are controlled, there are no significant direct effects of measured background on ln Earnings.

Table 9B shows that the bivariate coefficient of Education with ln Earnings is 0.0667. When measured background variables and Test scores are controlled, the effect of a 1 year schooling difference falls to 0.0458. And when measured and unmeasured background are controlled, along with Test scores, the effect is only 0.0310. This suggests a bias in the zero-order relationship between Education and ln Earnings on the order of 50 percent.

Among brothers who are equal on Test scores and Occupational status, the direct effect of educational differences on ln Earnings is statistically insignificant. Better educated men in the Kalamazoo sample earn more than their brothers mainly because they have higher test scores and are in higher status jobs.

Table 8B shows that 1 point difference in Test scores is associated with a 0.0106 expected difference in ln Earnings. When I control measured background and years of schooling, the effect falls to 0.0057. However, Table 16A2 shows that when I control educational attainment between brothers, a 1 point Test score difference means a difference of 0.0086 in ln Earnings. Moreover, the effect of test score differences between brothers is not substantially reduced when I control sibling differences on Early and Current Occupational status. This means that among brothers with equal levels of schooling and occupational status, test scores have a substantial effect on earnings. The direct effect of 0.0086 in Column 3 of Table 16A2 is 81.1 percent as large as the bivariate regression coefficient in Table 8B, i.e. 0.0106.

Annual Earnings (Tables 15A1 and 15A2)

The pattern of results with respect to annual earnings is the same as the pattern with respect to ln Earnings, and no important conclusions are suggested by the analysis of Annual Earnings that are not suggested by the analysis of ln Earnings.

Table 1: Coding of Principal Variables in the Kalamazoo Brothers' Data, with Frequency of Responses for Respondents in the Basic Sample (N = 1243)

Variable Name	Question	Response Category	Coding	Frequency (%)
Age	73 minus birthdate recorded in school records.	Responses in single years. Frequencies shown grouped.	30-34	0.2
			35-39	16.7
			40-44	22.1
			45-49	26.6
			50-54	24.5
			55-59	9.8
				99.9%
			(NA=4)	
Test Score	Score on Terman group test adjusted score on Otis group test, taken in sixth grade. See text for explanation of adjustment procedure.	Three digit scores. Frequencies shown grouped.	Less than or equal to 69	1.5
			70-79	6.9
			80-89	16.7
			90-99	23.8
			100-109	25.9
			110-119	14.3
			120-129	7.2
			130 and over	3.8
				100.1%
			(NA=6)	
No Male at Home	When you were 16, with whom were you living?	Adoptive parents Father and stepmother Mother and stepfather Mother and father Father only Mother only Other (specified)	Father or other male present = 0	91.3
			No male present = 1	8.7
				100.0%
			(NA=7)	
Father's Education	What was the highest grade in school your father finished? (If you are not sure, please give your best guess.)	Total years determined from 1. Never attended school. 2. Grades 1-12 (Give exact number.) 3. Business, vocational, or technical school (Give number of years.) 4. College (Give number of years.) 5 More than college (Give exact number.) Frequencies grouped.	0-7	17.6
			8	36.0
			9-11	16.7
			12	17.5
			13-15	5.8
			16	3.9
			17 and more	2.5
				100.0%
			(NA=116)	

Table 1: Coding of Principal Variables in the Kalamazoo Brothers' Data, with Frequency of Responses for Respondents in the Basic Sample (N = 1243)

Variable Name	Question	Response Category	Coding	Frequency (%)
Mother's Education	What was the highest grade in school your mother finished? (If you are not sure, please give your best guess.)	Same as Father's Education	0-7	11.6
			8	27.6
			9-11	17.1
			12	28.2
			13-15	9.0
			16	5.9
			17 and more	0.7
				100.1%
			(NA=137)	
Education	What was (sic.) the highest grade in school you have finished?	Same as Father's Education	0-7	0.2
			8	2.2
			9-11	19.7
			12	40.1
			13-15	16.0
			16	11.6
			17 and more	10.3
				100.1%
			(NA=6)	
Siblings	How many children older/younger than you grew up in your family?	Exact sum of answers to both questions.	1	14.2
			2	25.2
			3	20.0
			4	11.9
			5	9.7
			6	5.8
			7	4.4
			8 or more (grouped)	8.8
				100.0%
			(NA=21)	
Father's Occupation	We would like to find out what kind of work your father was doing when you were 16 years old. a. In what kind of business or industry did he work? b. What kind of work was he doing? Please describe his duties as specifically as possible.	Coded to Census 3-digit classification, and then recoded to Duncan 2-digit scale. Frequencies grouped.	0-9	4.2
			10-19	31.0
			20-29	10.4
			30-39	14.6
			40-49	13.4
			50-59	8.4
			60-69	7.0
			70-79	7.1
			80-89	2.9
			90-96	1.0
				100.0%
			(NA=84)	

Table 1: Coding of Principal Variables in the Kalamazoo Brothers' Data, with Frequency of Responses for Respondents in the Basic Sample (N = 1243)

Variable Name	Question	Response Category	Coding	Frequency (%)
Early Occupation	We would like to know about the first full-time civilian job you held after you completed all of your schooling. (Remainder same as Father's Occupation.)	Same as Father's Occupation.	0-9	7.4
			10-19	27.0
			20-29	12.9
			30-39	9.7
			40-49	14.9
			50-59	4.1
			60-69	8.8
			70-79	8.4
			80-89	5.8
			90-96	1.1
				100.1%
			(NA=35)	
Current Occupation	We would like to know about the principal job you have now. If you are retired or unemployed, please answer for your last regular job. (Remainder same as Father's Occupation.)	Same as Father's Occupation.	0-9	1.8
			10-19	14.6
			20-29	10.5
			30-39	8.7
			40-49	15.0
			50-59	9.3
			60-69	14.3
			70-79	15.7
			80-89	8.9
			90-96	1.1
				99.9%
			(NA=23)	
Annual Earnings	We would like to know what you expect to have earned from work at all jobs, businesses, or professions during 1973, before taxes and deductions. What figure comes closest to your expected earnings for 1973?	Under 1000	500	0.3
		1000-1999	1500	0.1
		2000-2999	2500	0.1
		3000-3999	3500	0.1
		4000-4999	4500	0.4
		5000-5999	5500	0.6
		6000-6999	6500	1.5
		7000-7999	7500	2.0
		8000-9999	9000	8.6
		10000-11999	11000	16.1
		12000-13999	13000	17.8
		14000-16999	15500	19.6
		17000-19999	19500	10.0
		20000-24999	22500	10.4
		25000 and over	34000	12.3
				99.9%
			(NA=128)	

Table 1: Coding of Principal Variables in the Kalamazoo Brothers' Data, with Frequency of Responses for Respondents in the Basic Sample (N = 1243)

Variable Name	Question	Response Category	Coding	Frequency (%)
Family Income	If you add your earnings to the earnings of all other members of your family who live with you now all year round, and to other income coming in, such as interest or dividends, or rent on property you own, pensions, or public assistance, what do you expect your family's total income was/will be in 1973, before taxes and deductions?	Under 1000	500	0.2
		1000-1999	1500	0.1
		2000-2999	2500	0.0
		3000-3999	3500	0.2
		4000-4999	4500	0.4
		5000-5999	5500	0.4
		6000-6999	6500	1.0
		7000-7999	7500	1.2
		8000-8999	9000	6.1
		10000-11999	11000	10.6
		12000-13999	13000	12.8
		14000-16999	15500	20.3
		17000-19999	18500	11.9
		20000-24999	22500	16.1
		25000 and over	34000	18.7
				100.0%
			(NA=153)	

Table 2: Means and Standard Deviations of 17 Basic Variables for the Kalamazoo Brothers Sample: Comparison of Basic Sample (N = 1243) To Complete Data Sample (N = 692)

		Means		Standard Deviations	
	Number Reporting Variable	Basic Sample	Complete Data Sample	Basic Sample	Complete Data Sample
Father's Education	1127	9.461	9.507	3.226	3.323
Father's Occupation	1159	36.681	38.329	21.643	22.504
Father White Collar	1159	.318	.350	.466	.477
No Male at Home	1236	.087	.067	.283	.250
Siblings	1222	3.727	3.721	2.529	2.524
Native Father	1238	.796	.794	.403	.405
Mother's Education	1106	10.189	10.235	3.048	2.978
Test Score	1237	100.017	100.893	15.302	15.326
Education	1237	12.964	13.197	2.654	2.730
Age	1239	46.392	46.135	5.994	6.013
Experience	1233	27.447	26.938	6.927	7.044
Early Occupation	1208	38.033	39.513	23.602	23.787
Current Occupation	1220	49.384	49.912	23.187	23.157
Annual Earnings	1115	16591.926	16745.668	7723.293	7630.852
$\text{Earnings}^{1/3}$	1115	24.940	25.048	3.771	3.668
Ln Earnings	1115	9.610	9.625	.469	.446
Total Family Income	1090	18929.355	19131.709	8374.254	8343.039

Table 2A: Correlations Among 17 Basic Variables for the Kalamazoo Brothers Sample: Comparison of Complete Data Sample (N = 692) to Basic Sample (N = 1243). Correlations from Complete Data Sample Shown Above; Correlations from Basic Sample Based on all Valid Cases

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Father's Education	1.000 1.000																
Father's Occupation	.470 .455	1.000 1.000															
Father White Collar	.413 .383	.723 .708	1.000 1.000														
No Male At Home	-.053 -.041	-.059 -.070	-.016 -.021	1.000 1.000													
Siblings	-.250 -.265	-.224 -.220	-.193 -.181	.114 .071	1.000 1.000												
Native Father	.251 .211	.171 .165	.113 .105	-.021 -.007	-.147 -.075	1.000 1.000											
Mother's Education	.518 .550	.372 .380	.297 .322	-.092 -.092	-.320 -.309	.243 .246	1.000 1.000										
Test Score	.261 .253	.260 .248	.200 .215	-.136 -.097	-.276 -.236	.109 .070	.248 .250	1.000 1.000									
Education	.400 .393	.383 .376	.377 .357	-.164 -.121	-.328 -.322	.081 .057	.339 .354	.576 .534	1.000 1.000								
Age	-.182 -.180	-.165 -.145	-.113 -.107	.013 .002	.066 .026	-.203 -.199	-.285 -.261	-.162 -.126	-.183 -.162	1.000 1.000							
Experience	-.310 -.306	-.289 -.266	-.243 -.225	.075 .047	.183 .143	-.205 -.194	-.374 -.360	-.361 -.313	-.544 -.522	.925 .926	1.000 1.000						
Early Occupation	.350 .331	.391 .370	.362 .349	-.119 -.081	-.256 -.245	.093 .068	.275 .286	.445 .401	.716 .698	-.140 -.125	-.397 -.373	1.000 1.000					
Current Occupation	.215 .221	.218 .259	.224 .233	-.093 -.067	-.220 -.205	.096 .056	.223 .234	.453 .401	.591 .571	-.105 -.073	-.318 -.281	.563 .559	1.000 1.000				
Annual Earnings	.171 .184	.212 .196	.243 .212	-.045 -.067	-.155 -.148	.042 -.009	.116 .133	.360 .356	.432 .417	-.071 -.088	-.228 -.236	.410 .396	.482 .445	1.000 1.000			
Earnings$^{1/3}$	.167 .184	.210 .199	.232 .202	-.048 -.073	-.157 -.144	.045 -.012	.108 .128	.373 .368	.430 .418	-.073 -.095	-.229 -.240	.408 .395	.503 .463	.981 .975	1.000 1.000		
Ln Earnings	.162 .178	.200 .191	.213 .185	-.047 -.075	-.152 -.125	.045 -.013	.096 .117	.366 .370	.409 .391	-.070 -.080	-.218 -.224	.389 .372	.493 .447	.942 .916	.988 .981	1.000 1.000	
Total Family Income	.173 .173	.182 .188	.218 .210	-.029 -.044	-.183 -.163	.032 -.003	.141 .153	.343 .329	.413 .401	-.020 -.046	-.177 -.193	.373 .359	.433 .400	.847 .848	.845 .843	.820 .808	1.000 1.000

Table 2C: Means and Standard Deviations of 10 Basic Variables: Kalamazoo Brothers Complete Data Sample Stratified by Age (Under 45, N = 279; 45 and over, N = 413)

	Means		Standard Deviations	
Variable	Under 45	45 and Over	Under 45	45 and Over
Father's Education	10.011	9.165	3.641	3.046
Father's Occupation	41.702	36.046	23.298	21.682
No Male at Home	.056	.074	.229	.263
Siblings	3.599	3.803	2.668	2.422
Test Score	104.067	98.745	15.022	15.174
Education	13.741	12.828	2.960	2.500
Early Occupation	42.531	37.470	25.963	21.992
Current Occupation	52.349	48.262	23.829	22.572
Annual Earnings	17395	16306	7845	7460
Ln Earnings	9.657	9.604	.482	.419

Table 2E: Means and Standard Deviations for 10 Basic Variables: Kalamazoo Brothers Complete Data Sample Stratified by Test Score (Less than 90, N = 168; 90 to 110, N = 349; Over 110, N = 175)

Variable	Means			Standard Deviations		
	Under 90	90 to 110	Over 110	Under 90	90 to 110	Over 110
Father's Education	8.379	9.455	10.697	2.582	3.183	3.813
Father's Occupation	30.347	38.650	43.378	18.858	22.569	23.231
No Male at Home	.120	.054	.040	.326	.227	.197
Siblings	4.518	3.759	2.876	2.616	2.586	2.005
Test Score	81.688	100.237	120.713	6.323	5.929	8.528
Education	11.360	12.982	15.395	1.811	2.311	2.752
Early Occupation	27.697	37.855	54.217	16.745	22.129	25.334
Current Occupation	37.803	48.666	64.074	20.957	22.461	18.782
Annual Earnings	13610	16225	20810	6057	7170	8165
Ln Earnings	9.436	9.597	9.864	.387	.449	.385

Table 2D: Means and Standard Deivations of 10 Basic Variables: Kalamazoo Brothers Complete Data Sample Stratified by Father's Occupation (Father White Collar, N = 242; Father Blue Collar, N = 450)

	Means		Standard Deviation	
Variable	Father White Collar	Father Blue Collar	Father White Collar	Father Blue Collar
Father's Education	11.377	8.500	4.000	2.345
Father's Occupation	60.485	26.401	18.031	14.055
No Male at Home	.061	.070	.240	.255
Siblings	3.056	4.078	2.023	2.692
Test Score	105.067	98.646	15.499	14.767
Education	14.598	12.442	2.727	2.418
EArly Occupation	51.227	33.206	24.313	20.966
Current Occupation	56.963	46.116	20.973	23.409
Annual Earnings	19273	15385	8576	6696
Ln Earnings	9.755	9.556	.502	.396

Table 2F: Means, Standard Deviations, and Coefficients of Variation for 8 Basic Variables from the Kalamazoo Brothers Complete Data Sample (N = 692) and the OCG Sample, Men Aged 35 to 54 (N = 5767)

Variable	Means		Standard Deivations		V	
	OCG	Kalamazoo	OCG	Kalamazoo	OCG	Kalamazoo
Father's Education	7.53	9.51	3.95	3.32	.55	.35
Father's Occupation	27.10	38.33	20.76	22.50	.77	.59
Number of Siblings	4.42	3.72	3.11	2.52	.70	.68
Education	11.01	13.20	3.60	2.73	.33	.21
Early Occupation	25.82	39.51	20.82	23.79	.81	.60
Current Occupation	38.98	49.91	24.64	23.16	.63	.46
Respondent's Income or Earnings[1]	6563	16746	4619	7631	.70	.46
Ln Income or Earnings[1]	8.54	9.63	.82	.45	.10	.05

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1. OCG variable is respondents income. Kalamazoo variable is earnings.

Table 2G: Correlations Among Selected Variables in the Kalamazoo Brothers Complete Data Sample (N = 692) and in the OCG Sample, Men Aged 35 to 54 (N = 5767) (Kalamazoo shown above.)

	Father's Education	Father's Occupation	Siblings	Education	Early Occupation	Current Occupation	Earnings	Ln Earnings
Father's Education	1.000 1.000							
Father's Occupation	.470 .460	1.000 1.000						
Siblings	-.250 -.258	-.224 -.275	1.000 1.000					
Education	.400 .421	.383 .441	-.328 -.349	1.000 1.000				
Early Occupation	.350 .296	.391 .417	-.256 -.254	.716 .545	1.000 1.000			
Current Occupation	.215 .301	.218 .412	-.220 -.272	.591 .624	.563 .517	1.000 1.000		
Earnings Income	.171 .253	.212 .358	-.155 -.206	.432 .443	.410 .397	.482 .509	1.000 1.000	
Ln Earnings Ln Income	.162 .240	.200 .289	-.152 -.199	.409 .434	.389 .323	.493 .452	.942 .795	1.000 1.000

Table 2H: Correlations Between Brother's Characteristics: Kalamazoo Brothers Complete Data Sample (N = 346 pairs) and Basic Sample; Complete Data Sample Shown Above

	Test Score 2	Education 2	Early Occupation 2	Current Occupation 2	Annual Earnings 2	Ln Earnings 2	Total Family Income 2
Test Score	.469 .489						
Education	.400 .421	.549 .559					
Early Occupation	.326 .333	.427 .422	.394 .369				
Current Occupation	.300 .307	.378 .367	.321 .297	.309 .265			
Annual Earnings	.178 .188	.285 .298	.231 .235	.225 .206	.237 .236		
Ln Earnings	.169 .178	.269 .280	.211 .221	.218 .197	.219 .214	.220 .206	
Total Family Income	.181 .194	.308 .311	.248 .230	.233 .205	.209 .197	.188 .175	.218 .200

Note: The variables across the top of the table refer to the second brother of the pair. The variables down the left side refer to the first brother of the pair.

Table 3A: Respondent's Characteristics by Level of Father's Education: Kalamazoo Brother's Basic Sample

Level of Father's Education	Survey N	I.Q.		Education		Early Occupation		Current Occupation		Annual Earnings		Earnings$^{1/3}$		Ln Earnings		Total Family Income	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Total	1243	100.02	15.30	12.96	2.65	38.03	23.60	49.38	23.19	16592	7723	24.86	3.75	9.61	.469	18929	8374
0-7	198	95.91	14.21	12.14	2.46	30.90	20.79	44.20	22.46	15372	6942	24.21	3.83	9.52	.553	17372	8088
8	406	99.30	14.29	12.62	2.47	35.73	22.01	48.86	22.73	16088	7386	24.66	3.48	9.59	.409	18495	7898
9-11	188	99.65	14.36	12.77	2.39	36.97	22.18	49.55	22.04	16515	7527	24.83	3.77	9.60	.496	19114	8307
12	197	102.45	16.30	13.55	2.39	42.13	23.81	51.61	23.66	17607	8260	25.34	3.89	9.67	.465	20046	8710
13-15	65	109.05	16.60	14.89	2.61	54.05	24.39	60.02	20.65	19678	9279	26.26	4.20	9.77	.489	21364	9347
16 and over	73	110.85	13.74	16.53	2.12	63.75	21.48	66.97	18.52	21266	8366	27.16	3.55	9.89	.390	23895	9089
NA	116	94.10	14.40	11.52	2.01	26.68	18.46	38.57	20.88	14128	6272	23.67	3.18	9.47	.391	16054	6948
Eta^2		.078		.191		.138		.074		.046		.045		.042		.043	
Number Reporting Dependent Variable		1237		1237		1208		1220		1115		1115		1115		1090	

Table 3B: Regression of Respondent's Characteristics on Father's Education: Kalamazoo Brothers Complete Data Sample (N = 692)

Dependent Variable		Unstandardized Coefficients (and Standard Errors) of Independent Variables					
		Father's Education	Father's Education^2	No Male at Home	Constant	R^2	S.D. of Residual
Test Score	1.	1.20384 (.16951)			89.44846	.068	14.80540
	2.	[.56058] (.68657)	[.02849] (.03091)	-7.49694 (2.24383)	85.67798	.084	14.69718
Education	1.	.32871 (.02866)			10.07159	.160	2.50347
	2.	-.22334 (.11367)	.02535 (.00512)	-1.51386 (.3715)	11.33615	.209	2.43336
Early Occupation	1.	2.50463 (.25531)			15.70228	.122	22.29985
	2.	[-.56384] (1.03033)	.14075 (.04639)	-9.30783 (3.36731)	21.91376	.144	22.05604
Current Occupation	1.	1.49616 (.25914)			35.68827	.046	22.63373
	2.	[-.57051] (1.05206)	.09458 (.04737)	-7.42673 (3.43834)	38.81287	.058	22.5213
Annual Earnings	1.	392.79590 (86.14185)			13011.55435	.029	7523.85901
	2.	[-153.79244] (351.09985)	[25.18395] (15.80788)	[-1046.81587] (1147.46065)	14677.07194	.034	7515.93280
Earnings$^{1/3}$	1.	.18384 (.04144)			23.29999	.028	3.61980
	2.	[-.05363] (.16895)	.01092 (.00761)	[-.55501] (.55217)	23.93196	.032	3.61677
Ln Earnings	1.	.02167 (.00504)			9.41908	.026	.44016
	2.	[-.00237] (.02055)	[.00110] (.00093)	[-.06622] (.06718)	9.47389	.030	.44001
Total Family Income	1.	434.27725 (94.14941)			15003.25293	.030	8223.26136
	2.	[44.08918] (384.32021)	[18.00031] (17.30359)	[-625.00095] (1256.03107)	16304.05048	.032	8227.07526

Coefficients in brackets are less than 1.96 times their standard errors.

Table 4A: Respondent's Characteristics by Level of Father's Occupation: Kalamazoo Brother's Basic Sample

Level of Father's Occupation	Survey N	I.Q.		Education		Early Occupation		Current Occupation		Annual Earnings		$\text{Earnings}^{1/3}$		Ln Earnings		Total Family Income	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Total	1243	100.02	15.30	12.96	2.65	38.03	23.60	49.38	23.19	16592	7723	24.86	3.75	9.61	.469	18929	8374
0-9	49	94.28	13.66	11.65	2.41	27.14	20.16	42.20	24.94	14864	6577	24.08	3.23	9.52	.392	17477	8364
10-19	359	96.08	14.78	12.27	2.43	30.57	21.40	44.46	23.91	15097	7182	24.07	3.71	9.51	.485	17081	7729
20-29	121	97.57	14.48	12.00	2.25	32.60	19.90	44.22	20.41	15786	7082	24.54	3.35	9.58	.395	17799	7936
30-39	169	100.46	14.57	12.95	2.50	37.10	22.52	49.19	22.97	16663	7439	24.95	3.62	9.62	.476	19304	8295
40-49	155	103.08	15.50	13.37	2.45	41.95	22.06	50.84	21.86	17583	7903	25.40	3.62	9.68	.418	20185	8462
50-59	97	103.91	15.42	13.56	2.61	40.22	22.57	55.08	22.51	17931	8232	25.50	3.92	9.69	.472	20947	8958
60-69	81	103.12	14.10	14.16	2.44	50.39	23.84	56.18	20.28	19301	9072	26.12	4.06	9.76	.462	21373	9076
70-79	82	107.93	15.88	15.20	2.58	56.71	23.76	63.79	21.00	20324	8299	26.72	3.61	9.83	.406	22356	8981
80-89	34	103.18	15.59	14.62	3.10	52.09	24.24	57.32	20.75	15258	6420	24.25	3.47	9.54	.449	17594	7984
90-96	12	113.67	12.61	17.08	1.78	67.67	23.56	69.25	20.29	23208	9880	27.88	4.11	9.96	.447	24917	8412
NA	84	98.56	14.23	12.09	2.31	35.26	22.87	46.23	21.63	14986	6613	24.05	3.67	9.50	.543	17588	7065
Eta^2		.067		.150		.133		.070		.053		.054		.051		.049	
Number Reporting Dependent Variable		1237		1237		1208		1220		1115		1115		1115		1090	

Table 4B: Regression of Respondent's Characteristics on Father's Occupation: Kalamazoo Brothers Complete Data Sample (N = 692)

Dependent Variable		Unstandardized Coefficients (and Standard Errors) of Independent Variables					
		Father's Occupation	Father's Occupation^2	No Male at Home	Constant	R^2	Residual
Test Score	1.	.17715 (.02503)			94.10301	.068	14.80905
	2.	.24012 (.10249)	[-.00075] (.00110)	-7.45494 (2.24542)	86.21970	.083	14.70815
Education	1.	.04643 (.00427)			11.41681	.14653	2.52361
	2.	[.02642] (.01739)	[.00021] (.00019)	-1.55078 (.38092)	10.31996	.168	2.49516
Early Occupation	1.	.41326 (.03704)			23.67273	.153	21.90950
	2.	.39501 (.15206)	[.00014] (.00164)	-9.15286 (3.33144)	15.56150	.162	21.82185
Current Occupation	1.	.22441 (.03823)			41.31034	.048	22.61627
	2.	[.14480] (.15726)	[.00083] (.00169)	-7.48132 (3.44536)	35.74125	.054	22.56808
Annual Earnings	1.	71.82131 (12.61621)			13992.86325	.045	7463.12732
	2.	101.76641 (52.03887)	[-.33974] (.56050)	[-989.35908] (1140.08562)	12592.60633	.046	7467.87530
Earnings$^{1/3}$	1.	.03417 (.00607)			23.73791	.044	3.58948
	2.	.05051 (.02502)	[-.00019] (.00027)	[-.52326] (.54823)	22.98906	.046	3.59108
Ln Earnings	1.	.00396 (.00074)			9.47352	.040	.43703
	2.	[.00584] (.00305)	[-.00002] (.00003)	[-.06249] (.06675)	9.38512	.042	.43725
Total Family Income	1.	67.40416 (13.87867)			16548.20728	.033	8209.93571
	2.	[103.67225] (57.26504)	[-.40714] (.61679)	[-604.90978] (1254.58252)	15397.52244	.034	8217.86158

Coefficients in brackets are less than 1.96 times their standard errors.

Table 5A: Respondent's Characteristics by Number of Siblings: Kalamazoo Brother's Basic Sample

Number of Siblings	Survey N	I.Q.		Education		Early Occupation		Current Occupation		Annual Earnings		Earnings$^{1/3}$		Ln Earnings		Total Family Income	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Total	1243	100.02	15.30	12.96	2.65	38.03	23.60	49.38	23.19	16592	7723	24.86	3.75	9.61	.469	18929	8374
1	173	105.34	16.12	13.90	2.52	44.16	25.01	56.43	22.32	18236	8351	25.63	4.03	9.70	.522	20459	8718
2	308	102.95	15.47	13.70	2.70	43.30	24.54	53.81	23.19	18083	8403	25.57	3.93	9.69	.483	20684	8828
3	245	102.49	14.99	13.54	2.72	42.85	24.51	52.13	22.25	16751	7745	24.94	3.80	9.62	.487	19414	8458
4	145	96.81	13.95	12.50	2.35	32.87	21.58	43.93	21.82	15326	6925	24.26	3.50	9.54	.444	17204	8033
5	119	96.06	13.62	11.98	2.14	32.08	20.26	44.35	22.33	16167	7142	24.72	3.48	9.60	.425	18810	8065
6	71	95.82	13.45	11.82	2.07	28.04	16.48	38.86	21.43	13000	5563	23.04	3.03	9.39	.387	14742	6703
7	54	93.46	13.17	11.93	2.52	28.76	20.39	39.33	23.05	14266	6023	23.75	3.20	9.48	.404	15777	5374
8 or more	107	93.15	13.99	11.18	2.24	27.13	17.84	43.95	23.35	15242	6934	24.25	3.35	9.54	.400	17521	7717
NA	21	93.95	13.15	12.22	1.70	31.71	18.57	47.77	23.21	15958	6683	24.73	3.11	9.61	.362	15773	3990
Eta^2		.075		.120		.078		.061		.038		.038		.033		.046	
Number Reporting Dependent Variable		1237		1237		1208		1220		1115		1115		1115		1090	

Table 5B: Regression of Respondent's Characterisi-cs on Number of Siblings: Kalamazoo Brothers Complete Data Sample (N = 692)

Dependent Variable		Unstandardized Coefficients (and Standard Errors) of Independent Variables				
		Siblings	Sibling^2	Constant	R^2	S. D. of Residuals
Test Score	1.	-1.67452 (.22218)		107.12275	.076	14.74217
	2.	-4.19220 (.72258)	.22459 (.06139)	111.95216	.094	14.61163
Education	1.	-.35447 (.03889)		14.51529	.107	2.58076
	2.	-.70822 (.12693)	.03156 (.01078)	15.19386	.118	2.56673
Early Occupation	1.	-2.41383 (.34679)		48.49508	.066	23.01007
	2.	-5.40576 (1.13242)	.26689 (.09621)	54.23219	.076	22.89924
Current Occupation	1.	-2.02109 (.34068)		57.43095	.049	22.60467
	2.	-5.14234 (1.11167)	.27843 (.09445)	63.41811	.060	22.47975
Annual Earnings	1.	-467.29696 (113.70532)		18484.22623	.024	7544.59957
	2.	-1386.06567 (371.55527)	81.95720 (31.56727)	20246.60501	.033	7513.40947
Earnings $^{1/3}$	1.	-.22887 (.05464)		25.89922	.025	3.62525
	2.	-.68503 (.17848)	.04069 (.01516)	26.77422	.035	3.60906
Ln Earnings	1.	-.02691 (.00664)		9.72526	.023	.44081
	2.	-.08242 (.02170)	.00495 (.00184)	9.83173	.033	.43884
Total Family Income	1.	-604.62018 (123.70660)		21381.17233	.033	8208.20638
	2.	-1441.89049 (404.82607)	74.68728 (34.39395)	22987.22118	.040	8186.19545

Table 7A: Respondents' Characteristics by Age: Kalamazoo Brothers' Basic Sample

Age	Survey N	I.Q.		Education		Early Occupation		Current Occupation		Annual Earnings		Earnings$^{1/3}$		Ln Earnings		Total Family Income	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Total	1243	100.02	15.30	12.96	2.65	38.03	23.60	49.38	23.19	16592	7723	24.86	3.75	9.61	.469	18929	8373
30-34	2	106.00	5.66	13.50	3.54	51.00	46.67	25.50	2.12	15000	10607	23.83	6.10	9.47	.778	15750	95[illegible]
35-39	207	101.84	13.60	13.80	2.74	44.08	26.38	52.38	23.66	17340	7825	25.27	3.66	9.66	.433	18943	81[illegible]
40-44	274	103.49	16.85	13.19	2.94	38.32	24.86	50.24	23.51	17567	8150	25.31	3.97	9.66	.509	19731	8773
45-49	330	98.09	16.51	12.71	2.53	37.37	22.37	49.05	22.68	16005	7400	24.59	3.61	9.58	.456	18701	8276
50-54	304	99.00	14.47	12.80	2.47	37.05	21.87	48.42	23.22	16225	7533	24.70	3.62	9.59	.432	18868	820[illegible]
55-59	122	96.80	10.77	12.17	2.16	31.36	20.95	46.26	22.61	15160	7271	24.09	3.82	9.51	.530	17495	8161
NA	4	102.67	19.73	12.25	4.03	39.25	25.17	45.75	30.13	27833	10681	29.81	4.29	10.17	.450	34000	23
Eta^2		.024		.031		.020		.007		.016		.016		.015		.011	
Number Reporting Dependent Variable		1237		1237		1208		1220		1115		1115		1115		1090	

Table 7B: Regression of Respondent's Characteristics on Age for Kalamazoo Brothers Complete Data Sample (N = 692)

Dependent Variable		Unstandardized Coefficients (and Standard Errors) of Independent Variables Age	Age^2	Constant	R^2	S. D. of Residuals
Test Score	1.	-.41255 (.09576)		119.92577	.026	15.13475
	2.	[-.21725] (1.47045)	[-.00212] (.01596)	115.51477	.026	15.14554
Education	1.	-.08323 (.01699)		17.03640	.034	2.68537
	2.	[-.15189] (.26089)	[.00075] (.00283)	18.58699	.034	2.68718
Early Occupation	1.	-.55396 (.14912)		65.06903	.020	23.56970
	2.	[.14673] (2.28983)	[-.00762] (.02486)	49.24353	.020	23.58519
Current Occupation	1.	-.40319 (.14582)		68.51255	.011	23.04668
	2.	[-.85147] (2.23911)	[.00488] (.02431)	78.63733	.011	23.06272
Annual Earnings	1.	[-89.95425] (48.19366)		20895.66529	.005	7617.17378
	2.	[668.87719] (739.50329)	[-8.25573] (8.02835)	3756.82404	.007	7616.85671
Earnings $^{1/3}$	1.	[-.04476] (.02316)		27.11257	.005	3.66116
	2.	[.27697] (.35560)	[-.00350] (.00386)	19.84615	.007	3.66163
Ln Earnings	1.	[-.00515] (.00282)		9.86290	.005	.44494
	2.	[.02864] (.04321)	[-.00037] (.00047)	9.09953	.006	.44506
Total Family Income	1.	[-27.49364] (52.81406)		20400.11513	.000	8347.44356
	2.	[1522.13087] (808.86149)	[-16.85920] (8.78133)	-14599.44794	.006	8331.24370

Coefficients in brackets are less than 1.96 times their standard errors.

Table 8A: Respondent's Characteristics by Test Score: Kalamazoo Brothers' Basic Sample

Test Score	Survey N	Education		Early Occupation		Current Occupation		Annual Earnings		Earnings$^{1/3}$		Ln Earnings		Total Family Income	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Total	1243	12.96	2.65	38.03	23.60	49.38	23.19	16592	7723	24.86	3.75	9.61	.469	18929	8373
70 and below	18	9.89	1.68	17.61	7.79	28.12	17.55	11382	3421	22.21	2.29	9.29	.314	14219	6287
71-85	204	11.22	1.74	26.21	17.22	35.94	21.38	12986	6181	22.90	3.56	9.36	.532	15119	6990
86-100	424	12.33	2.06	34.25	20.70	45.20	22.11	15304	7035	24.23	3.55	9.53	.454	17634	8041
101-115	401	13.53	2.51	41.37	23.39	55.33	21.11	17944	7672	25.62	3.48	9.71	.398	20411	8111
116-130	152	14.99	2.85	50.35	26.34	61.53	20.46	20079	8094	26.64	3.48	9.83	.386	21935	8465
131 and above	38	16.76	2.37	68.58	19.94	67.74	20.93	23734	8935	28.14	3.89	9.99	.440	26677	8658
NA	6	12.67	3.33	33.17	31.35	38.67	23.41	17167	9647	25.03	4.51	9.63	.525	20667	11470
Eta^2		.260		.154		.154		.111		.125		.125		.096	
Number Reporting Dependent Variable		1237		1208		1220		1115		1115		1115		1090	

Table 8B: Regression of Respondent's Characteristics on Test Score: Kalamazoo Brothers Complete Data Sample (N = 6[illegible]2)

Dependent Variable		Unstandardized Coefficients (and Standard Errors) of Independent Variables				
		Test Score	Test Score^2	Constant	R^2	S. D. of Residuals
Education	1.	.10260 (.00554)		2.84531	.332	2.23295
	2.	[.00219] (.05357)	[.00049] (.00026)	7.88384	.335	2.22883
Early Occupation	1.	.69066 (.05291)		-30.16996	.198	21.31753
	2.	[-.47421] (.51076)	.00567 (.00247)	28.28495	.204	21.25207
Current Occupation	1.	.68509 (.05127)		-19.20909	.206	20.65511
	2.	[.05769] (.49619)	[.00306] (.00240)	12.27474	.207	20.64589
Annual Earnings	1.	179.04737 (17.68701)		-1318.91868	.129	7125.55483
	2.	[-160.63895] (170.88163)	1.65412 (.82767)	15727.10014	.134	7110.14490
Earnings $^{1/3}$	1.	.08932 (.00845)		16.03645	.139	3.40591
	2.	[-.04970] (.08174)	[.00068] (.00040)	23.01254	.143	3.40117
Ln Earnings	1.	.01064 (.00103)		8.55180	.134	.41511
	2.	[-.00483] (.00997)	[.00008] (.00005)	9.32819	.137	.41467
Total Family Income	1.	186.82086 (19.46544)		282.83246	.118	7842.02964
	2.	[-100.70606] (188.28631)	[1.40013] (.91197)	14711.40590	.121	7834.32913

Coefficients in brackets are less than 1.96 times their standard error.

Table 9A: Respondent's Characteristics by Education: The Kalamazoo Brothers' Basic Sample

Education	Survey N	I.Q.		Early Occupation		Current Occupation		Annual Earnings		$\text{Earnings}^{1/3}$		Ln Earnings		Total Family Income	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Total	1243	100.02	15.30	38.03	23.60	49.38	23.19	16592	7723	24.86	3.75	9.61	.470	18929	8373
0-7	2	93.00	26.87	12.50	7.78	40.00	9.90	11000	6364	21.73	-.42	9.21	.615	11000	6364
8	27	84.63	15.41	17.44	7.98	29.65	19.31	13458	7538	22.96	4.32	9.35	.617	15152	8519
9-11	244	90.34	12.70	23.00	14.23	33.21	18.98	13168	6036	23.04	3.43	9.38	.497	14938	6665
12	496	97.34	12.04	28.54	15.29	44.99	20.97	14896	5937	24.17	2.90	9.54	.349	17326	6930
13-15	197	103.20	14.20	42.99	20.73	53.34	20.62	17792	8091	25.46	3.80	9.68	.449	20607	8620
16	143	111.04	12.41	63.29	19.40	68.46	14.83	22313	8290	27.61	3.59	9.93	.408	24286	8457
17 and over	128	115.02	15.21	71.47	15.10	73.65	12.82	21764	8743	27.28	4.00	9.88	.519	24513	9152
NA	6	98.33	15.69	69.50	24.75	58.67	21.94	22500	16263	27.23	7.15	9.87	.799	23500	1484
Eta^2		.279		.516		.323		.181		.179		.162		.169	
Number Reporting Dependent Variable		1237		1208		1220		1115		1115		1115		1090	

Table 9B: Regression of Measures of Economic Attainment on Education: Kalamazoo Brothers Complete Data Sample (N=692)

Unstandardized Coefficients (and Standard Errors) of Independent Variables

Dependent Variable		Years of Education	Years of Education^2	Years College	Years Higher Education	Years Grad School	H.S. Dipl.	B.A.	Voc. Training	Constant	R^2	SD of Residuals
Early Occupation	(1)	6.2377 (.23165)								-42.8035	.512	16.6223
	(2)	[1.0107] (2.0099)	.1854 (.0708)							-7.4900	.517	16.5523
	(3)	3.0908 (.4881)		3.6405 (1.1514)		*	*	8.1400 (3.9803)	*	-7.6633	.548	16.0284
	(4)	3.1656 (.7012)			[1.2953] (1.0163)			15.1368 (3.2641)		-8.1143	.542	16.1254
Current Occupation	(1)	5.0124 (.2606)								-16.2351	.349	18.6964
	(2)	7.1635 (2.2704)	[-.07629] (.0800)							-30.7678	.350	18.6978
	(3)	5.5282 (.3690)		*		-2.2725 (1.1536)	*	*	*	-22.3617	.353	18.6575
	(4)	5.7215 (.8089)			-2.7093 (1.1724)			10.8755 (3.7656)		-23.9888	.358	18.6029
Annual Earnings	(1)	1206.6829 (95.9978)								821.6643	.186	6888.3226
	(2)	[1557.5824] (836.9183)	[-12.4456] (29.4874)							-1549.0129	.187	6892.4288
	(3)	815.0361 (208.1657)		694.5029 (327.7648)		*	*	*	*	5159.6407	.192	6870.9693
	(4)	1031.3641 (299.7435)			[44.5731] (434.4434)			[1032.7802] (1395.3429)		2804.3798	.187	6893.3978

Table 9B Continued

Dependent Variable		Years of Education	Years of Education^2	Years College	Years Higher Education	Years Grad School	H.S. Dipl.	B.A.	Voc. Training	Constant	R^2	SD of Residuals
Earnings 1/3	(1)	.5778 (.0462)								17.4226	.185	3.3144
	(2)	.9860 (.4024)	[-.0145] (.0142)							14.6648	.186	3.3143
	(3)	.6090 (.1443)			[-.1354] (.2091)			[.5753] (.6715)		17.0837	.186	3.3174
	(4)	.5778 (.0462)		*		*	*	*	*	17.4226	.185	3.3144
Ln Earnings	(1)	.0667 (.0057)								8.7448	.167	.4071
	(2)	.1312 (.0494)	[-.0023] (.0017)							8.3093	.169	.4069
	(3)	.0667 (.0057)		*		*	*	*	*	8.7448	.167	.4071
	(4)	.0792 (.0177)			[-.0265] (.0257)			[.0645] (.0825)		8.6056	.168	.4074
Total Family Income	(1)	1260.8248 (105.9938)								2493.2219	.170	7605.5894
	(2)	2042.9991 (923.6974)	[-27.7419] (32.5449)							-2791.1494	.171	7607.0965
	(3)	1260.8248 (105.9938)		*		*	*	*	*	2493.2219	.170	7605.5894
	(4)	1311.8307 (331.0930)			[-225.8941] (479.8808)			[976.1525] (1541.2786)		1938.7268	.171	7614.3622

Coefficients in brackets are less than 1.96 times their standard errors.
* Indicates that a variable did not enter an equation because its coefficient was less than 1.96 times its standard error.

Table 10: Regression of Measures of Economic Attainment on Education and Experience for Kalamazoo Brothers Complete Data Sample (N=692)

Unstandardized Coefficients (and standard errors) of Independent Variables

		Education	Years Higher Education	B.A.	Experience	Experience^2	Education x Experience	Education x Experience^2	B.A. x Expr.	Yrs. Higher x Experience	Constant	R^2	SD of Residuals
Current Occupation	(1)	5.03278 (.31075)			[.01449] (.12042)						-16.98103	.349	18.70977
	(2)	5.77946 (.82062)	-2.72339 (1.17357)	11.06880 (3.79475)	[.05174] (.12081)						-26.48339	.358	18.61399
	(3)	5.79608 (.82775)	-2.75217 (1.18811)	11.05733 (3.79812)	[-.08768] (.87976)	[.00212] (.04215)					-24.47133	.358	18.62721
	(4)	4.81599 (1.16792)			[-.08053] (.50794)		[.00718] (.03731)				-14.03789	.349	18.72286
	(5)	6.13693 (1.93188)	-2.83770 (1.30071)	11.06125 (3.79758)	[.16755] (.57926)		[-.00881] (.04311)	*	*	*	-31.09248	.358	18.6269
Annual Earnings	(1)	1221.90807 (114.48518)			[10.84545] (44.36391)						263.51788	.186	6893.02078
	(2)	1049.85929 (304.09529)	[40.06876] (434.88793)	[1100.48440] (1406.20775)	[16.51128] (44.76865)						2008.21634	.188	6897.73018
	(3)	991.91182 (306.23758)	[140.37292] (439.55377)	[1140.42898] (1405.15832)	[502.39094] (325.47730)	[-7.40179] (4.91121)					-5003.97851	.190	6891.35630
	(4)	889.59163 (430.09210)			[-134.81622] (187.05368)		[11.01236] (13.73799)				4775.05688	.187	6894.80945
	(5)	889.59163 (430.09210)			[-134.81622] (187.05368)		[11.01236] (13.73799)	*	*	*	4775.05688	.187	6894.80945
	(6)	[186.47062] (714.98425)	[316.14706] (481.39138)	[1118.72040] (1405.47682)	[-263.19742] (214.38336)		[21.28524] (15.95486)	*	*	*	13140.23005	.190	6893.81876

Table 10: Continued

		Education	Years Higher Education	B.A.	Experience	Experience^2	Education x Experience	Education x Experience^2	B.A. x Expr.	Yrs. Higher x Experience	Constant	R^2	SD of Residuals
Earning 1/3	(1)	.58266 (.05509)			[.00345] (.02135)						17.24492	.185	3.31675
	(2)	.61514 (.14635)	[-.13688] (.20930)	[.59590] (.67676)	[.00552] (.02155)						16.81761	.186	3.31963
	(3)	.58797 (.14739)	[-.08985] (.21156)	[.61463] (.67631)	[.23333] (.15665)	[-.00347] (.00236)					13.52990	.188	3.31684
	(4)	[.33302] (.20681)			[-.10597] (.08995)		[.00827] (.00661)				20.63408	.187	3.31538
	(5)	[.33302] (.20681)			[-.10597] (.08995)		[.00827] (.00661)	*	*	*	20.63408	.187	3.31538
	(6)	[.19232] (.34408)	[-.00168] (.23167)	[.60483] (.67637)	[-.13146] (.10317)		[.01042] (.00768)				22.26927	.188	3.31759
Ln Earnings	(1)	.06729 (.00677)			[.00041] (.00262)						8.72352	.167	.40738
	(2)	.07988 (.01797)	[-.02661] (.02570)	[.06663] (.08310)	[.00057] (.00265)						8.57796	.168	.40764
	(3)	.07677 (.01810)	[-.02123] (.02598)	[.06877] (.08307)	[.02661] (.01924)	[-.00040] (.00029)					8.20221	.171	.40738
	(4)	[.03127] (.02539)			[-.01537] (.01104)		[.00119] (.00081)				9.21250	.170	.40704
	(5)	[.03127] (.02539)			[-.01537] (.01104)		[.00119] (.00081)	*	*	*	9.21250	.170	.40704
	(6)	[.03010] (.04226)	[-.01069] (.02845)	[.06768] (.08306)	[-.01556] (.01267)		[.00123] (.00094)	*	*	*	9.21981	.170	.40743

Table 10: Continued

		Education	Years Higher Education	B.A.	Experience	Experience^2	Education x Experience	Education x Experience^2	B.A. x Expr.	Yrs. Higher x Expr.	Constant	R^2	SD of Residuals
Total Family Income	(1)	1373.32970 (126.16599)			[80.14156] (48.89031)						-1631.15549	.173	7596.30873
	(2)	1406.91614 (335.21210)	[-249.05141] (479.38822)	[1284.37585] (1550.09918)	[84.88578] (49.34965)						-2154.41249	.174	7603.54643
	(3)	1287.87990 (336.1884)	[-43.00567] (482.54389)	[1366.43038] (1542.58842)	1082.98433 (357.31029)	-15.20483 (5.39155)					-16558.92885	.184	7567.3565
	(4)	[460.83778] (472.81979)			[-319.82390] (205.63661)		30.23833 (15.10280)				10756.86498	.178	7579.77735
	(5)	[405.29116] (472.25137)			[152.58807] (299.31889)		71.91445 (24.42949	-1.20536 (.55627)	*	*	-4497.69187	.184	7559.50328
	(6)	[-133.04287] (786.12978)	[275.34404] (529.29292)	[1319.01413] (1545.33080)	[-446.40542] (235.71588)		40.43014 (17.54247)	*	*	*	18990.23157	.181	7579.79804

Coefficients in brackets are less than 1.96 times their standard errors.

* Indicates that a variable did not enter an equation because its coefficient was less than 1.96 times its standard error.

Table 12: Regression of Test Score on Background Characteristics: Kalamazoo Brothers Complete Data Sample (N = 692)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Errors) for Selected Equations

		1		2		3		4	
	Zero Order Correlation	B (s.e)	Beta	B (s.e.)	Beta	B (s.e.)	Beta	B (s.e.)	Beta
Father's Education	.261	.490 (.207)	.106	.470 (.206)	.102	.468 (.205)	.101	.497 (.205)	.108
Father's Occupation	.260	.092 (.037)	.136	.082 (.037)	.120	.078 (.037)	.115	.071 (.037)	.104
White Collar Father	.200	[-.066] (1.658)	-.002	[.183] (1.653)	.006	[.233] (1.648)	.007	[.045] (1.643)	.001
No Male At Home	-.136	-5.833 (2.191)	-.095	-5.574 (2.182)	.091	-5.651 (2.176)	.092	-5.382 (2.170)	.088
Siblings	-.276	-1.112 (.230)	-.183	-1.140 (.228)	-.188	-1.162 (.229)	-.191	[-1.108] (.229)	-.182
Native Father	.109	[.486] (1.401)	.013	[.349] (1.395)	.009	[-.101] (1.404)	-.003	[-.065] (1.398)	.002
Mother's Education	.248	[.376] (.223)	.073	[.367] (.222)	.071	[.260] (.226)	.051	[.301] (.225)	.058
Siblings^2**	.133			.164 (.060)	.097	.154 (.060)	.091	.150 (.060)	.082
Age	-.162					-.221 (.095)	-.087	-.217 (.094)	-.085
Native Father by Father's Ed. **	.131							1.250 (.497)	.090
Constant		87.171		91.755		103.357		111.255	
R^2		.146		.155		.162		.169	
SD of Residuals		14.238		14.172		14.126		14.071	

** Squared terms and multiplicative interaction terms are orthogonal to their components. Table 19 describes their construction

Coefficients in brackets are less than 1.96 times their standard errors.

Table 13A1: Regression of Education on Respondent's Characteristics: Kalamazoo Brothers Complete Data Sample

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and standard errors) for Selected Equations (N = 692)

		1		2		3		4		5	
	Zero Order Correlation	B (s.e.)	Beta	B (s.e.)	Beta	B (s.e.)	Beta	B (s.e.)	Beta	B (s.e.)	Beta
Father's Education	.400	.1638 (.0337)	.199	.1711 (.0334)	.208	.1704 (.0332)	.207	.1958 (.0336)	.238	.1573 (.0296)	.191
Father's Occupation	.383	.0114 (.0060)	.094	[.0062] (.0060)	.051	[.0056] (.0060)	.046	[.0034] (.0060)	.028	[-.0027] (.0053)	-.0220
White Collar Father	.377	.9537 (.2698)	.167	.9663 (.2671)	.169	.9753 (.2661)	.171	.8579 (.2644)	.150	.8543 (.2318)	.149
No Male At Home	-.104	-1.2702 (.3564)	.116	-1.2077 (.3526)	.110	-1.222 (.3513)	.112	-1.1009 (.3485)	.101	-.6868 (.3069)	.063
Siblings	-.328	-.2056 (.0374)	-.190	-.2118 (.0370)	-.196	-.2155 (.0369)	-.199	-.2026 (.0367)	-.187	-.1179 (.0327)	-.109
Native Father	.081	[-.3852] (.2279)	-.0571	[-.3244] (.2262)	-.048	[-.4042] (.2276)	-.060	[-.4185] (.2261)	-.0620	-.3971 (.1982)	-.0589
Mother's Education	.339	.0856 (.0362)	.0934	.0885 (.0358)	.096	[.0698] (.0364)	.076	[.0697] (.0361)	.076	[.0464] (.0317)	.0506
Sibling^{2}**	.105			[.0174] (.0097)	.058	[.0157] (.0097)	.052	[.0160] (.0096)	.053	[.0045] (.0065)	.015
Father's Education^{2}**	.172			.0195 (.0050)	.129	.0190 (.0049)	.126	.0256 (.0077)	.170	.0297 (.0068)	.197
Age	-.183					-.0383 (.0153)	-.0844	-.0371 (.0152)	-.082	[-.0204] (.0133)	-.045
Test Score	.576									.0771 (.0054)	.433

Table 13A1: Continued

	Zero Order Correlation	1		2		3		4		5	
		B (s.e.)	Beta	B (s.e.)	Beta	B (s.e.)	Beta	B (s.e.)	Beta	B (s.e.)	Beta
Native Father by Father's Education**	.184							.2157 (.0878)	.0869	[.1049] (.0773)	.042
No Male by Father's Education	.100							.3175 (.1300)	.078	.2894 (.1140)	.071
Father's Occupation by Siblings	.016							.0039 (.0019)	.070	[.0031] (.0017)	.056
Father's Occupation by Father's Education	.038							[-.0023] (.0015)	-.071	-.0029 (.0014)	-.090
Constant		9.8774		12.4011		14.3557		13.1341		4.7479	
R^2		.287		.306		.312		.333		.4[illegible]8	
SD of Residuals		2.3166		2.2891		2.2803		2.2519		1.9743	

** Squared terms and multiplicative interaction terms are orthogonal to their components. Table 19 describes their construction.

Coefficients in brackets are less than 1.96 times their standard error.

Table 13.A2: Regression of Sibling Differences in Education on Differences in Test Scores for Kalamazoo Brothers Complete Data Sample (N = 346 pairs)

	Standardized (Beta) and Unstandardized (B) Regression Coefficient (and Standard Error)	
	B (s.e.)	Beta[a]
Test Score Differences	.0593 (.0083)	.333
S.D. of Residuals[b]	1.713	

a. Calculated using individual level standard deviations (see Table 2).

b. Calculated by multiplying the observed residual standard deviation of sibling differences by 0.707. The correction is necessary because the residual standard deviation of sibling differences in twice the standard deviation of the deviations of individual values from fair means, and because the expected within-pair variance is only half the total variance even when the sibling correlation is zero.

Table 13C: Regression of Educational Attainment on Respondent's Characteristics for Kalamazoo Brothers Complete Data Sample Stratified By Age (Under 45, N = 279; 45 and Over, N = 413)

	Zero Order Correlation		1		2	
Independent Variable	Under 45	45 and Over	Under 45 b (s.e.)	45 & Over b (s.e.)	Under 45 b (s.e.)	45 & Over b (s.e.)
Father's Education	.505	.275	.2646 (.0500)	.1193 (.0393)	.2106 (.0435)	.0791 (.0352)
Father's Occupation	.448	.301	.0286 (.0077)	.0209 (.0056)	.0203 (.0067)	.0146 (.0050)
No Male at HOme	-.071	-.225	[-.6754] (.6435)	-1.6107 (.4235)	[-.4976] (.5558)	-1.0507 (.3809)
Siblings	-.328	-.325	-.2008 (.0578)	-.2405 (.0473)	[-.0975] (.0511)	-.1514 (.0430)
Test Score	.595	.543			.0885 (.0091)	.0718 (.0069)
Constant			9.9857	10.4050	1.4541	4.0933
R^2			.328	.209	.501	.374
SD of Residuals			2.4435	2.2339	2.1092	1.9892

Coefficients in brackets are less than 1.96 times their standard error.

Table 13D: Regression of Education on Respondents Characteristics for Kalamazoo Brothers Sample Stratified by Father's Occupation (N White Collar = 242, N Blue Collar = 450)

Unstandardized Regression Coefficient (B) and Standard Errors for Selected Equations

	Zero Order Correlation		1		2	
	White Collar	Blue Collar	White Collar B (s.e.)	Blue Collar B (s.e.)	White Collar B (s.e.)	Blue Collar B (s.e.)
Father's Education	.408	.180	.2395 (.0447)	.1093 (.0462)	.1653 (.0382)	[.0711] (.0414)
Father's Occupation	.221	.135	[.0086] (.0097)	[.0125] (.0076)	[.0050] (.0082)	[.0021] (.0069)
No Male At Home	-.062	-.233	[-.5142] (.6656)	-1.7571 (.4196)	[-.0720] (.5594)	-1.2763 (.3773)
Siblings	-.232	-.310	-.1967 (.0809)	-.2289 (.0406)	[-.0872] (.0687)	-.1436 (.0371)
Test Score	.604	.519			.0915 (.0091)	.0725 (.0068)
Constant			11.4711	10.4817	2.9947	4.0314
R^2			.193	.151	.436	.385
SD of Residual			2.4710	2.2376	2.0703	1.9977

Coefficients in brackets are less than 1.96 times their standard errors.

Table 13E: Regression of Educational Attainment on Respondent's Characteristics For Kalamazoo Brothers Complete Data Sample Stratified by Test Score (less than 90, N = 168; 90 to 110, N = 349; Over 110, N = 175)

Independent Variable	Zero Order Correlation			1			2		
	Under 90	90 to 110	Over 110	Under 90 b (s.e)	90 to 110 b (s.e.)	Over 110 b (s.e.)	Under 90 b (s.e.)	90 to 110 b (s.e.)	Over 110 b (s.e.)
Father's Education	.185	.358	.350	[.0688] (.0510)	.17345 (.0404)	.1389 (.0602)	[.0556] (.0507)	.1765 (.0395)	.1419 (.0576)
Father's Occupation	.207	.318	.374	[.0131] (.0069)	.0163 (.0057)	.0314 (.0098)	.0136 (.0068)	.0134 (.0056)	.0277 (.0094)
Female Head of Household	-.259	-.072	-.136	-1.0495 (.4019)	[-.6257] (.4920)	[-1.8329] (.9682)	-.9127 (.4018)	[-.5558] (.4809)	[-1.6213] (.9271)
Siblings	-.344	-.287	-.124	-.1805 (.0516)	-.1811 (.0444)	[-.0557] (.0970)	-.1693 (.0513)	-.1642 (.0436)	[.0456] (.0960)
Test Score	.239	.261	.335				.0461 (.0206)	.0780 (.0187)	.0919 (.0223)
Constant				10.2779	10.7994	10.8854	6.6758	3.0676	- .1579
R^2				.185	.199	.189	.209	.238	.263
SD of Residuals				1.6550	2.0805	2.5064	1.6351	2.0326	2.3964

Coefficients in brackets are less than 1.96 times their standard errors.

Table 14.A1: Regression of Early Occupation on Respondent's Characteristics for Kalamazoo Brother's Complete Data Sample (N= 692)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Errors) for Selected Equations

		1		2		3		4	
	Zero Order Correlation	B (s.e)	Beta	B (s.e.)	Beta	B (s.e.)	Beta	B (s.e.)	Beta
Father's Education	.350	1.3237 (.3106)	.185	1.0622 (.2928)	.148	[.2186] (.2464)	.031	[.3727] (.2500)	.052
Father's Occupation	.391	.1343 (.0556)	.127	[.0991] (.0524)	.0937	.1114 (.0432)	.105	.1218 (.0421)	.115
White Collar Father	.362	6.3502 (2.4446)	.127	6.1295 (2.2932)	.123	[1.0757] (1.9133)	.022	[.3004] (1.8618)	.006
No Male At Home	-.119	-6.8651 (3.2253)	.072	[-5.0547] (3.0604)	.053	[-1.1559] (2.5383)	-.012	[-3.0663] (2.5111)	.032
Siblings	-.256	-1.2383 (.3395)	-.131	-.6399 (.3245)	-.068	[-.0581] (.2746)	-.006	[-.0452] (.2667)	-.005
Native Father	.093	[-1.6338] (2.0867)	-.028	[-1.6677] (1.9574)	-.028	[.5321] (1.6197)	.009	[.6225] (1.5740)	.011
Mother's Education	.275	[.2386] (.3344)	.030	[.1540] (.3151)	.019	[-.0711] (.2603)	-.009	[-.0299] (.2530)	-.004
Father's Education^{2}**	.110	.1859 (.0687)	.141	.1868 (.0646)	.142	[.0177] (.0542)	.013	[-.0084] (.0529)	-.006
Siblings^{2}**	.102	[.1414] (.0892)	.054	[.0246] (.0861)	.009	[-.0051] (.0712)	-.002	[-.0202] (.0690)	-.008
Native Father by Father's Occupation**	-.039	[-.1589] (.1067)	-.053	[-.1325] (.1004)	-.044	[-.1467] (.0835)	-.049	-.1601 (.0813)	-.053
Father's Occupation by Father's Ed.**	-.026	-.0293 (.0144)	-.106	-.0339 (.0135)	-.123	[-.0174] (.0112)	-.063	[-.0061] (.0114)	-.022

Table 14.A1: Continued.

	Zero Order Correlation	1 B (s.e.)	1 Beta	2 B (s.e.)	2 Beta	3 B (s.e.)	3 Beta	4 B (s.e.)	4 Beta
Age	-.140	[-.2186] (.1405)	-.055	[-.0985] (.1323)	-.025	[.0247] (.1094)	.006	[.0951] (.1071)	.024
Test Score	.445			.4972 (.0532)	.320	[.0551] (.0504)	.036	[.0649] (.0491)	.042
Test Score**	.078			[.0032] (.0026)	.044	[-.0049] (.0028)	-.067	[-.0024] (.0028)	-.033
Test Score by Siblings**	-.084			[-.0449] (.0240)	-.068	-.0581 (.0202)	-.088	-.0433 (.0198)	-.065
Education	.716					5.5842 (.314)	.641	2.1319 (.9123)	.245
Years Higher Education	.718							[1.7291] (1.2079)	.168
B.A.	.697							14.3594 (3.2539)	.262
Test Score by Education**	.082					.0483 (.0198)	.094	[.0135] (.0224)	.026
Years Post-Secondary by Father's Occ.**	-.097							-.0389 (.0129)	-.089
Constant		30.6290		-6.5931		-61.8028		-49.2858	
R^2		.242		.336		.549		.578	
SD of Residuals		20.8950		19.5970		16.1677		15.6721	

** Squared terms and multiplicative interaction terms are orthogonal to their components. Table 19 describes their construction.

Coefficients in brackets are less than 1.96 times their standard errors.

Table 14A2: Regression of Sibling Differences on Early Occupational Status on Sibling Differences on Test Scores, and Education for Kalamazoo Brothers Complete Data Sample (N=346 pairs)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Errors) for Selected Equations

	(1)		(2)		(3)		(4)		(5)	
	B (S.E.)	Beta[a]	B (S.E.)	Beta[a]	B (S.E.)	Beta[a]	B (S.E.)	Beta[a]	B (S.E.)	Beta[a]
Test Score Difference	.3500 (.0874)	.226					[.0224] (.0801)	.014	[.0286] (.0779)	.018
Education Difference			5.5882 (.4546)	.640	[1.6612] (1.2100)	.191	5.5264 (.4876)	.634	[1.5796] (1.2318)	.181
Years Higher Education Dif.					[2.6139] (1.5429)	.254			[2.6436] (1.5470)	.257
BA Difference					13.7866 (4.4960)	.251			13.7408 (4.5034)	.250
S.D. of Residuals[b]	16.1331		15.4651		15.0246		15.4897		15.0436	

a,b See Table 13.A2

Table 14A3: Regression of Current Occupation on Respondent's Characteristics for Kalamazoo Brothers Complete Data Sample (N = 692)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Errors) for Selected Equations

	Zero Order Correlation	1		2		3		4		5	
		B (s.e)	Beta	B (s.e.)	Beta	B (s.e.)	Beta	B (s.e.)	Beta	B (s.e.)	Beta
Father's Education	.215	[.4641] (.3184)	.067	[.1852] (.2974)	.027	[-.3922] (.2745)	-.056	[-.3852] (.2742)	-.055	[-.4040] (.2661)	-.058
Father's Occupation	.218	[.0016] (.0575)	.002	[-.0420] (.0536)	-.041	[-.0402] (.0487)	-.039	[-.0367] (.0487)	-.036	[-.0778] (.0476)	-.076
White Collar Father	.224	5.7330 (2.5506)	.118	5.7129 (2.3720)	.118	[1.6956] (2.1815)	.035	[1.1476] (2.1817)	.024	[.9846] (2.1171)	.020
No Male At Home	-.093	[-4.9389] (3.3678)	-.053	[-1.8469] (3.1463)	-.020	[-1.4201] (2.8722)	-.015	[-1.4686] (2.9308)	-.016	[-2.4860] (2.8480)	-.027
Siblings	-.220	-1.1987 (.3559)	-.131	[-.5723] (.3364)	-.062	[-.0607] (.3087)	-.007	[-.0235] (.3091)	-.003	[-.0240] (.3005)	.003
Native Father	.096	[.7176] (2.1803)	.013	[.8289] (2.0277)	.014	[2.5646] (1.8484)	.045	[2.3514] (1.8440)	.041	[2.1251] (1.7907)	.037
Mother's Education	.223	.7022 (.3497)	.090	[.5304] (.3257)	.068	[.3057] (.2965)	.039	[.3579] (.2960)	.046	[.3699] (.2872)	.048
Father's Ed.^{2**}	.076	[.0100] (.0523)	.008	[.0288] (.0486)	.023	[-.0377] (.0445)	-.029	[-.0431] (.0450)	-.034	[-.0216] (.0438)	-.017
Siblings^{2**}	.109	.1994 (.0933)	.078	[.1144] (.0871)	.045	[.1005] (.0792)	.039	[.0985] (.0789)	.039	[.0944] (.0766)	.037
Native Fa. Fa's Ed**	.147	2.3250 (.8486)	.110	[1.4809] (.7934)	.070	[.9779] (.7222)	.046	[1.0074] (.7197)	.048	[1.0446] (.6997)	.050
ge	-.105	[-.1211] (.1466)	-.031	[.0053] (.1369)	.001	[.0959] (.1246)	.025	[.1347] (.1252)	.035	[.0998] (.1216)	.026
est core	.453			.5731 (.0554)	.379	.2435 (.0573)	.161	.2350 (.0572)	.156	.2185 (.0556)	.145
ducation	.591					4.2644 (.3552)	.503	4.6676 (.8895)	.550	4.0977 (1.0111)	.483
ears igher Ed	.552							[-2.1764] (1.2006)	-.217	-2.7464 (1.3508)	-.274
.A.	.531							10.4552 (3.7880)	.196	[6.1659] (3.7375)	.115
est Score Ed.**	-.013									[-.0022] (.0179)	-.004
arly cupation	.563									.2876 (.0433)	.295
nstant		62.2533		-.47141		-29.3748		-35.6327		-32.18145	
		.125		.244		.377		.384		.422	
of iduals		21.8396		20.3110		18.4582		18.3807		17.8334	

** Squared terms and multplicative interactions are orthogonal to their components. Table 19 describes the constructions.

Coefficients in brackets are less than 1.96 times their standard errors.

Table 14A4: Regression of Sibling Differences on Current Occupation on Sibling Differences on Test Scores, Education and Early Occupation

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Errors) for Selected Equations

	(1) B (S.E.)	Beta[a]	(2) B (S.E.)	Beta[a]	(3) B (S.E.)	Beta[a]	(4) B (S.E.)	Beta[a]	(5) B (S.E.)	Beta[a]	(6) B (S.E.)	Beta[a]	(7) B (S.E.)	Beta[a]	(8) B (S.E.)	Beta[a]
Test Score Difference	.4364 (.0900)	.289							.2290 (.0915)	.152	.2235 (.0895)	.148	.2261 (.0909)	.150	.2198 (.0894)	.145
Education Difference			4.0020 (.5236)	.472			3.0348 (1.4257)	.358	3.4986 (.5572)	.412	2.1499 (.6392)	.253	[2.3890] (1.4387)	.282	[2.0384] (1.4179)	.240
Years Higher Eduation Dif							[-.9241] (1.8179)	-.092					[-.6894] (1.8068)	-.069	[-1.2763] (1.7840)	-.127
BA Difference							13.6999 (5.2973)	.256					13.3375 (5.2596)	.250	10.2873 (5.2415)	.193
Early Occupation Dif.					.3900 (.0520)	.401					.2440 (.0604)	.251			.2220 (.0622)	.228
S.D. of Residuals[b]	18.6641		17.8362		17.8836		17.7024		17.7019		17.3187		17.5697		17.2748	

a,b See Table 13A2

Table 14C1: Regression of Early Occupational Status on Respondent's Characteristics for the Kalamazoo Brothers Complete Data Sample, Stratified by Age (Under 45, N = 279; 45 and Over, N = 413)

	Zero Order Correlation		1		2		3	
	Under 45	45 & Over	Under 45 b (s.e.)	45 & Over b (s.e.)	Under 45 b (s.e.)	45 & Over b (s.e.)	Under 45 b (s.e.)	45 & Over b (s.e.)
Father's Education	.421	.265	1.6283 (.4641)	.9444 (.3519)	1.2769 (.4379)	.6933 (.3360)	[-.2370] (.3452)	[.3565] (.2817)
Father's Occupation	.427	.346	.2968 (.0711)	.2563 (.0497)	.2432 (.0671)	.2175 (.0475)	.1346 (.0513)	.1420 (.0401)
Female Head of Household	-.022	-.183	[-.8401] (5.9684)	-11.0742 (3.7924)	[.3173] (5.5899)	-7.5770 (3.6357)	[1.3097] (4.2087)	-6.2223 (3.1675)
Siblings	-.268	-.241	-1.4120 (.5365)	-1.2768 (.4239)	[-.7394] (.5134)	[-.7201] (.4105)	[-.2501] (.3930)	[-.1346] (.3485)
Test Score	.466	.415			.5763 (.0915)	.4482 (.0661)	[.0053] (.0795)	[.1032] (.0619)
Education	.772	.655					2.7327 (1.2509)	[1.1807] (.9678)
Years Post-Secondary	.772	.658					[1.2171] (1.5975)	2.8043 (1.3632)
B.A.	.762	.626					18.4181 (4.8792)	11.4225 (4.3281)
Constant			18.1402	14.1624	-37.4085	-25.2531	-5.6475	-7.1659
R^2			.249	.180	.344	.264	.638	.493
SD of Residual			22.6636	20.0062	21.2150	18.9857	15.8465	15.8109

Coefficients in brackets are less than 1.96 times their standard errors.

Table 14C2: Regression of Current Occupational Status on Respondent's Characteristics for the Kalamazoo Complete Data Sample, Stratified by Age (Under 45, N = 279; 45 and Over, N = 413)

	Zero Order Correlation		1		2		3	
	Under 45	45 & Over	Under 45 b (s.e.)	45 & Over b (s.e.)	Under 45 b (s.e.)	45 & Over b (s.e.)	Under 45 b (s.e.)	45 & Over b (s.e.)
Father's Education	.283	.141	[.6768] (.4518)	[.6331] (.3887)	[.2551] (.4100)	[.3324] (.3674)	[-.5421] (.3901)	[.0027] (.3332)
Father's Occupation	.316	.128	.2205 (.0692)	[.0615] (.0549)	.1562 (.0626)	[.0145] (.0519)	[.0670] (.0579)	[-.0611] (.0475)
Female Head of Household	-.059	-.111	[-3.9937] (5.8111)	[-7.1577] (4.1885)	[-2.6050] (5.2334)	[-2.9694] (3.9753)	[-.2484] (4.7558)	[1.3089] (3.7461)
Siblings	-.278	-.171	-1.7710 (.5224)	-1.2077 (.4681)	-.9640 (.4807)	[-.5410] (.4489)	[-.4522] (.4441)	[.0953] (.4122)
Test Score	.521	.395			.6915 (.0856)	.5367 (.0722)	.3203 (.0898)	.2164 (.0732)
Education	.639	.545					5.5888 (1.4135)	4.4030 (1.1446)
Years Higher Education	.591	.512					[-2.5605] (1.8052)	[-2.3549] (1.6122)
B.A.	.562	.498					[4.9567] (5.5134)	14.5709 (5.1187)
Constant			38.9798	38.2095	-27.6675	-8.9945	-50.2174	-26.1920
R^2			.155	.051	.318	.164	.452	.327
SD of Residual			22.0664	22.0959	19.8619	20.7593	17.9062	18.6991

Coefficients in brackets are less than 1.96 times their standard errors.

Table 14D2: Regression of Current Occupation on Respondents Characteristics for Kalamazoo Brothers Sample Stratified by Fathers Occupation (N White Collar = 242, N Blue Collar = 450)

Unstandardized Regression Coefficient (B) and Standard Errors for Selected Equations

	Zero Order Correlation		1		2		3	
	White Collar	Blue Collar	White Collar B (s.e.)	Blue Collar B (s.e.)	White Collar B (s.e.)	Blue Collar B (s.e.)	White Collar B (s.e.)	Blue Collar B (s.e.)
Father's Education	.192	.106	.7922 (.3729)	[.6074] (.4714)	[.3095] (.3442)	[.2913] (.4408)	[-.3158] (.3132)	[-.0212] (.4054)
Father's Occupation	.111	.069	[.0424] (.0812)	[.0510] (.0779)	[.0191] (.0736)	[-.0349] (.0733)	[-.0012] (.0643)	[-.0420] (.0674)
No Male At Home	-.001	-.133	[-.9208] (5.5503)	-9.5202 (4.2846)	[3.7975] (5.0424)	[-5.5433] (4.0197)	[3.8575] (4.5550)	[-.0360] (3.7994)
Siblings	-.152	-.198	[-1.2048] (.6746)	-1.4634 (.4141)	[-.4921] (.6188)	[-.7573] (.3950)	[-.0668] (.5428)	[-.1354] (.3704)
Test Score	.464	.411			.5955 (.0819)	.5994 (.0722)	.1889 (.0858)	.2854 (.0744)
Education	.609	.541					5.6607 (2.4540)	4.3501 (1.0217)
Years of Higher Ed.	.597	.485					[-4.0633] (2.6920)	[-.9558] (1.5418)
B.A.	.610	.440					14.6068 (4.7561)	[5.8149] (5.6136)
Constant			49.9305	36.7172	-5.2083	-16.6379	-33.7250	-34.1987
R^2			.051	.056	.225	.182	.416	.318
SD of Residuals			20.6058	22.8500	18.6626	21.2845	16.2959	19.5058

Coefficients in brackets are less than 1.96 times their standard errors.

Table 14E1: Regression of Early Occupational Status on Respondent's Characteristics for the Kalamazoo Brothers Sample Complete Data Sample, Stratified by Test Score (Less Than 90, N = 168; 90 to 110, N = 349; Over 110, N = 175)

	Zero Order Correlation			1			2			3		
	Under 90	90-110	Over 90	Under 90 B (S.E.)	90-110 B (S.E.)	Over 110 B (S.E.)	Under 90	90-110	Over 110	Under 90	90-110	Over 110
Father's Education	.172	.294	.318	[.9284] (.4977)	.8545 (.3909)	1.1461 (.5666)	[.8735] (.5012)	.8738 (.3873)	1.1697 (.5499)	[.6669] (.4525)	[-.2012] (.3148)	[.4215] (.4295)
Father's Occupation	.214	.380	.327	.1694 (.0676)	.2841 (.0551)	.2380 (.0919)	.1717 (.0676)	.2655 (.0550)	.2092 (.0896)	.1257 (.0626)	.2020 (.0438)	[.0200] (.0704)
No Male At Home	-.176	-.049	-.086	-7.8225 (3.9248)	[-3.4491] (4.7566)	[-10.0906] (9.1095)	[-7.2490] (3.9725)	[-3.0014] (4.7155)	[-8.4238] 8.8531	[-4.6065] (3.6664)	[-3.0383] (3.7820)	[1.2584] (7.0986)
Siblings	-.078	-.234	-.183	[.1092] (.5042)	-1.2796 (.4295)	[-1.4172] (.9130)	[.1559] (.5068)	-1.1710 (.4273)	[-.6196] (.9165)	[.7316] (.4737)	[-.3330] (.3443)	[-.6941] (.7046)
Test Score	.116	.201	.305				[.1933] (.2040)	.4999 (.1832)	.7236 (.2130)	[.0529] (.1885)	[.0627] (.1498)	[.2096] (.1729)
Education	.458	.658	.716							2.3730 (1.0503)	[1.1263] (1.2061)	[7.5911] (4.2144)
Years of Higher Ed.	.432	.670	.709							[2.0399] (2.4697)	2.9057 (1.6306)	[-3.9669] (4.4617)
B.A.	.393	.648	.686							[13.4046] (10.1398)	14.7125 (4.7652)	14.6160 (5.3130)
Constant				7.3984	20.3426	25.5459	-7.7061	-29.2082	-61.4440	-21.5078	2.9200	-84.8517
R^2				.091	.183	.153	.096	.201	.208	.284	.507	.549
SD of Residual				16.1620	20.1159	23.5823	16.1671	19.9301	22.8832	14.5197	15.7150	17.4174

Coefficients in brackets are less than 1.96 times their standard errors.

Table 14E2: Regression of Current Occupational Status on Respondent's Characteristics for the Kalamazoo Brothers Sample Complete Data Sample, Stratified by Test Score (Less Than 90, N = 168; 90 to 110; N = 349; Over 110, N = 175)

	Zero Order Correlation			1			2			3		
	Under 90	90-110	Over 110	Under 90 B (s.e.)	90-110 B (s.e.)	Over 110 B (s.e.)	Under 90 B (s.e.)	90-110 B (s.e.)	Over 110 B (s.e.)	Under 90 B (s.e.)	90-110 B (s.e.)	Over 110 B (s.e.)
Father's Education	.110	.154	.107	[.6743] (.6429)	[.5224] (.4272)	[.3173] (.4483)	[.6099] (.6478)	[.5572] (.4154)	[.3373] (.4329)	[.3135] (.6034)	[-.2730] (.3867)	[-.159 (.376
Father's Occupation	.129	.172	.080	[.1196] (.0873)	[.1089] (.0602)	[.0262] (.0727)	[.1223] (.0874)	[.0753] (.0590)	[.0018] (.0705)	[.0687] (.0835)	[.0149] (.0538)	[-.116 (.061
No Male At Home	-.052	-.038	-.119	[-1.5388] (5.0698)	[-3.0098] (5.1992)	[-10.7981] (7.2078)	[-.8654] (5.1338)	[-2.2028] (5.0572)	[-9.3860] (6.9698)	[2.9699] (4.8898)	[.5526] [4.6462]	[-6.247 (6.224
Siblings	-.107	-.167	-.125	[-.5249] (.6513)	-1.1139 (.4694)	[-.9529] (.7224)	[-.4700] (.6549)	-.9182 (.4583)	[-.2772] (.7215)	[.3000] (.6318)	[-.1928] (.4230)	[-.372 (.617
Test Score	.091	.268	.300				[.2269] (.2637)	.9011 (.1965)	.6130 (.1677)	[.0364] (.2513)	.4991 (.1840)	[.262 (.151
Education	.417	.499	.544							4.0027 (1.4008)	5.7485 (1.4817)	[-.802 (3.695
Years of Higher Education	.348	.457	.549							[3.0567] (3.2937)	[-3.2692] (2.0032)	[2.710 (3.912
B.A.	.2[illegible]3	.443	.553							[-6.1573] (13.5230)	10.4396 (5.8540)	13.011 (4.659
Constant				29.5399	40.8574	51.8660	11.8038	-48.4701	-21.8300	-14.9024	-70.5638	29.924
R^2				.031	.053	.036	.036	.107	.106	.187	.278	.369
SD of Residual				20.8769	21.9878	18.6592	20.8935	21.3744	18.0153	19.3644	19.3057	15.273

Coefficients in brackets are less than 1.96 times their standard errors.

Table 15A1: Regressions of Annual Earnings on Respondent's Characteristics for Kalamazoo Brothers Complete Data Sample (N=69

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Errors) for Selected Equations

		1		2		3		4		5		6	
	Zero Order Correlation	B (s.e.)	Beta	B (s.e.)	Beta	B (s.e.)	Beta	B (s.e.)	Beta	B (s.e.)	Beta	B (s.e.)	Beta
Father's Education	.171	[171.14] (108.19)	.075	[98.38] (103.51)	.043	[-9.54] (101.65)	-.004	[34.65] (104.90)	.015	[64.01] (100.31)	.028	[52.05] (100.54)	.023
Father's Occupation	.212	[9.04] (19.04)	.027	[-2.28] (18.20)	-.007	[-5.88] (17.66)	-.017	[-7.15] (17.62)	-.021	[-.95] (16.86)	-.003	[-4.25] (16.99)	-.013
White Collar Father	.243	2783.24 (857.54)	.174	2708.56 (817.41)	.169	1895.39 (801.83)	.119	1858.67 (802.17)	.116	1741.90 (766.22)	.109	1739.12 (765.53)	.109
No Male At Home	-.045	[-733.52] (1130.18)	.024	[-53.33] (1086.49)	-.002	[710.96] (1059.59)	.023	[623.48] (1077.91)	.020	[573.97] (1030.86)	.019	[642.93] (1030.97)	.021
Siblings	-.155	-292.13 (119.32)	-.097	[-112.29] (115.78)	-.037	[-8.83] (113.32)	-.003	[1.21] (113.83)	.0004	[-1.02] (108.75)	-.0003	[.86] (108.66)	.0003
Native Father	.042	[-393.98] (729.89)	-.021	[-375.40] (695.49)	-.020	[26.17] (676.96)	.001	[69.89] (677.23)	.004	[-148.92] (648.03)	-.008	[-157.99] (647.47)	-.008
Mother's Education	.118	[-68.41] (117.44)	-.027	[-109.76] (112.02)	-.042	[-144.72] (108.73)	-.056	[-157.60] (108.78)	-.067	[-180.29] (104.12)	-.070	[-173.01] (104.04)	-.069
Siblings^{2}**	.097	65.59 (31.32)	.078	[39.68] (30.00)	.047	[37.55] (29.09)	.045	[34.10] (29.08)	.040	[24.96] (27.76)	.030	[25.07] (27.73)	.030
Native Father by Father's Occ**	-.042	[-46.22] (36.17)	-.048	[-37.43] (34.53)	-.039	[-42.53] (33.48)	-.044	[-42.75] (33.39)	-.044	[-34.88] (32.07)	-.036	[-31.42] (32.12)	-.032
Female Head by Father's Occ**	.080	[104.57] (54.71)	.070	113.41 (52.32)	.076	[89.19] (50.86)	.060	[77.52] (50.88)	.052	[74.12] (48.59)	.050	[73.55] (48.54)	.050
Age	-.071	[-37.90] (49.34)	-.030	[-1.66] (47.21)	-.001	[16.78] (45.85)	.013	[7.03] (46.30)	.006	[-3.05] (44.28)	-.002	[-5.15] (44.26)	-.004
Test Score	.360			154.68 (18.96)	.311	87.29 (20.98)	.175	90.13 (20.96)	.181	60.76 (20.35)	.122	60.57 (20.33)	.122

Table 15A1: Continued

	Zero Order Correlation	1 B (s.e.)	1 Beta	2 B (s.e.)	2 Beta	3 B (s.e.)	3 Beta	4 B (s.e.)	4 Beta	5 B (s.e.)	5 Beta	6 B (s.e.)	6 Beta
Test Score^2**	.071			1.67 (.82)	.071	[1.16] (.80)	.050	[1.17] (.83)	.050	[.80] (.80)	.034	[.81] (.80)	.035
Education	.432					861.31 (129.35)	.308	623.08 (338.32)	.223	[524.98] (395.09)	.188	[472.64] (396.30)	.169
Years Higher Ed.	.416							[225.17] (456.61)	.068	[-19.24] (508.94)	-.006	[-40.36] (508.68)	-.012
B.A.	.383							[264.77] (1392.92)	.015	[-945.04] (1338.46)	-.054	[-1241.05] (1351.94)	-.070
A. by Father's cupation**	-.047							133.72 (60.05)	.173	128.70 (57.47)	.166	130.67 (57.44)	.169
s. Higher Ed. Father's Occ**	-.081							-31.50 (10.96)	-.226	-29.86 (10.50)	-.214	[-29.16] (10.50)	-.209
Current Occupation	.482									107.12 (13.49)	.325	102.00 (13.91)	.310
Education by Current Occ**	.070									11.01 (5.80)	.082	[10.00] (5.84)	.075
Early Occupation	.410											[24.45] (16.42)	.076
Constant		13866.95		14699.82		6456.83		8563.71		13081.41		13097.22	
R^2		.090		.176		.227		.237		.306		.309	
SD of Residuals		7337.77		6991.92		6778.64		6753.72		6449.35		6443.51	

Coefficients in brackets are less than 1.96 times their standard errors.

** Squared terms and multiplicative interaction terms are orthogonal to their components. Table 19 describes their construction.

Table 15A2: Regressions of Sibling Differences on Annual Earnings on Sibling Differences on Individual Characteristics for Kalamazoo Brothers Complete Data Sample (N = 346 pairs)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Errors) for Selected Equations

	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)	
	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
Test Score Difference	169.59 (30.87)	.341			133.28 (32.70)	.268			111.25 (31.83)	.223	133.59 (32.72)	.268	112.12 (31.70)	.225	112.69 (31.81)	.22
Education Difference			905.51 (189.90)	.324	612.49 (199.16)	.219	[616.91] (520.70)	.221	[275.80] (202.82)	.099	[235.33] (517.67)	.084	[67.99] (227.94)	.024	[-37.11] (501.52)	-.01
Years Higher Education Dif.							[-58.10] (663.94)	.019			[80.55] (650.12)	.024			[34.06] (629.57)	.01
B.A. Difference							[2671.85] (1934.69)	.152			2457.75 (1892.56)	.140			[738.06] (1858.74)	.04
Early Occupation Dif.													[42.65] (21.68)	.133	[40.37] (22.34)	.12
Current Occupation Dif.									96.24 (18.61)	.292			88.27 (18.97)	.268	87.35 (19.12)	.26
S.D. of Residuals[b]	6404.01		6468.70		6326.73		6465.31		6101.98		6322.09		6076.52		6091.64	

a,b See Table 13A2

Coefficients in brackets are less than 1.96 times their standard errors.

Table 16A1: Regressions of Ln Earnings on Respondents Characteristics for Kalamazoo Brothers
Complete Data Sample (N=692)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and standard errors) for Selected Equations

	Zero Order Correlation	1 B (s.e.)	Beta	2 B (s.e.)	Beta	3 B (s.e.)	Beta	4 B (s.e.)	Beta	5 B (s.e.)	Beta	6 B (s.e.)	Beta
Father's Education	.162	[.01001] (.00627)	.075	[.00541] (.00601)	.040	[-.00057] (.00594)	-.004	[-.00030] (.00596)	-.002	[.00226] (.00566)	.017	[.00194] (.00565)	.014
Father's Occupation	.200	[.00070] (.00112)	.035	[.00005] (.00107)	.003	[-.00005] (.00104)	-.003	[-.00008] (.00105)	-.004	[.00024] (.00099)	.012	[-.00001] (.00100)	-.001
White Collar Father	.213	.12260 (.05028)	.131	.12219 (.04797)	.131	[.07928] (.04733)	.085	[.07835] (.04758)	.084	[.06982] (.04509)	.075	[.06906] (.04501)	.074
No Male At Home	-.047	[-.03834] (.06639)	-.021	[-.01139] (.06362)	-.006	[.04690] (.06234)	.026	[.05538] (.06391)	.031	[.04441] (.06057)	.025	[.05101] (.06056)	.029
Siblings	-.152	-.01796 (.00700)	-.102	[-.00772] (.00679)	-.044	[-.00252] (.00668)	-.014	[-.00200] (.00673)	-.011	[-.00171] (.00635)	-.010	[-.00139] (.00637)	-.008
Native Father	.045	[-.01348] (.04279)	-.012	[-.01288] (.04082)	-.012	[.00855] (.03998)	.008	[.00667] (.04012)	.006	[-.01061] (.03806)	-.010	[-.01171] (.03799)	-.011
Mother's Education	.096	[-.00600] (.00689)	-.040	[-.00878] (.00659)	-.059	[-.01117] (.00644)	-.075	[-.01115] (.00646)	-.075	-.01367 (.00613)	-.091	-.01346 (.00612)	-.090
Siblings^{2}**	.101	[.00383] (.00184)	.078	[.00245] (.00176)	.050	[.00232] (.00172)	.047	[.00236] (.00172)	.048	[.00165] (.00163)	.034	[.00166] (.00163)	.034
Native Father by Father's Ed.	.125	.03574 (.01521)	.088	[.02419] (.01458)	.060	[.01392] (.01432)	.034	[.01421] (.01434)	.035	[.00910] (.01360)	.022	[.01050] (.01360)	.0259
Age	-.071	[-.00244] (.00289)	-.033	[-.00043] (.00276)	-.006	[.00062] (.00270)	.008	[.00060] (.00273)	.008	[-.00036] (.00259)	-.005	[-.00053] (.00259)	-.007
Test Score	.366			.00924 (.00112)	.318	.00573 (.00124)	.197	.00568 (.00124)	.195	.00400 (.00119)	.137	.00397 (.00119)	.136

Table 16A1: Continued

	Zero Order Correlation	1 B (s.e.)	1 Beta	2 B (s.e.)	2 Beta	3 B (s.e.)	3 Beta	4 B (s.e.)	4 Beta	5 B (s.e.)	5 Beta	6 B (s.e.)	6 Beta
Education	.409					.04577 (.00765)	.280	.05736 (.01933)	.351	[.02401] (.01870)	.147	[.02247] (.01868)	.138
Years Post-Secondary	.379							[-.01741] (.02608)	-.090	[-.00134] (.02477)	-.007	[-.00589] (.02485)	-.031
B.A.	.350							[.02068] (.0825)	.020	[-.05124] (.07858)	-.080	[-.07287] (.07929)	-.071
Current Occupation	.493									.00703 (.00079)	.365	.00665 (.00082)	.345
Early Occupation	.389											[.00177] (.00095)	.094
Constant		10.00147		8.97347		8.69917		8.58388		8.82502		8.84376	
R^2		.080		.164		.206		.207		.289		.293	
SD of Residuals		.43054		.41074		.40061		.40106		.37998		.37928	

Coefficients in brackets are less than 1.96 times their standard errors.

** Squared terms and multiplicative interactions are orthogonal to their components. Table 19 describes their construction.

Table 16A2: Regressions of Sibling Differences on Ln Earnings on Sibling Differences on Individual Characteristics for Kalamazoo Brothers Complete Data Sample (N = 346 pairs)

Standardized (Beta) and Unstandardized (B) Regression Coefficients (and Standard Errors) for Selected Equations

	(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)	
	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta	B (S.E.)	Beta
Test Score Difference	.0105 (.0018)	.361			.0086 (.0019)	.296			.0072 (.0019)	.247	.0086 (.0019)	.296	.0073 (.0019)	.251	.0072 (.0019)	.247
Education Dif.			.0499 (.0113)	.305	.0310 (.0118)	.190	[.0474] (.0310)	.290	[.0094] (.0119)	.058	[.0229] (.0306)	.140	[-.0020] (.0134)	-.012	[.0057] (.0295)	.035
Years Higher Education Dif.							[-.0237] (.0395)	-.123			[-.0148] (.0385)	-.077			[-.0170] (.0370)	-.088
B.A. Difference							[.1772] (.1150)	.172			[.1635] (.1120)	.159			[.0561] (.1093)	.055
Early Occupation Dif.													[.0023] (.0013)	.123	[.0023] (.0013)	.123
Current Occupation Dif.									.0062 (.0011)	.331			.0057 (.0011)	.296	.0057 (.0011)	.296
S.D. of Residuals^b	.3774		.3843		.3742		.3842		.3585		.3742		.3572		.3583	

a,b See Table 13A2

Coefficients in brackets are less than 1.96 times their standard errors.

Table 16C: Regressions of Ln Earnings on Respondent's Characteristics for Kalamazoo Brothers Complete Data Sample, Stratified by Age (Under 45, N = 279; 45 and Over, N = 413)

	Zero Order Correlation		1		2		3	
	Under 45	45 & Over	Under 45 b (s.e.)	45 & Over b (s.e.)	Under 45 b (s.e.)	45 & Over b (s.e.)	Under 45 b (s.e.)	45 & Over b (s.e.)
Father's Education	.218	.098	[.0143] (.0095)	[.0030] (.0072)	[.0079] (.0091)	[-.0019] (.0069)	[.0021] (.0095)	[-.0061] (.0067)
Father's Occupation	.220	.173	[.0027] (.0015)	.0027 (.0010)	[.0018] (.0014)	[.0019] (.0010)	[.0009] (.0014)	[.0010] (.0010)
No Male At Home	.057	-.115	[.1467] (.1227)	[-.1435] (.0779)	[.1679] (.1167)	[-.0754] (.0751)	[.2000] (.1162)	[-.0290] (.0755)
Siblings	-.175	-.130	-.0223 (.0110)	[-.0145] (.0087)	[-.0010] (.0107)	[-.0036] (.0085)	[-.0043] (.0109)	[.0043] (.0083)
Test Score	.380	.350			.0105 (.0019)	.0087 (.0014)	.0073 (.0022)	.0047 (.0015)
Education	.385	.424					.0728 (.0346)	[.0448] (.0231)
Years of Higher Education	.351	.400					[-.0408] (.0441)	[.0011] (.0325)
B.A.	.325	.367					[-.0169] (.1348)	[.0783] (.1032)
Constant			9.6184	9.4028	8.6036	8.6346	8.1344	8.5214
R^2			.078	.047	.171	.134	.199	.206
SD of Residual			.4660	.4108	.4428	.3920	.4377	.3769

Coefficients in brackets are less than 1.96 times their standard errors.

Table 16D: Regressions of Ln Earnings on Respondents Characteristics For Kalamazoo Brothers Sample Stratified by Fathers Occupation (N White Collar = 242, N Blue Collar = 450)

Unstandardized Regression Coefficient (B) and Standard Errors for Selected Equations

	Zero Order Correlation		1		2		3		4	
	White Collar	Blue Collar	White Collar B (s.e.)	Blue Collar B (s.e.)	White Collar B (s.e.)	Blue Collar B (s.e.)	White Collar B (s.e.)	Blue Collar B (s.e.)	White Collar B (s.e.)	Blue Collar B (s.e.)
Father's Education	.169	-.016	.0198 (.0089)	[-.0080] (.0081)	[.0122] (.0088)	[-.0130] (.0077)	[.0068] (.0090)	-.0166 (.0074)	[.0070] (.0090)	-.0165 (.0074)
Father's Occupation	.034	.097	[-.0012] (.0020)	[.0024] (.0013)	[-.0016] (.0019)	[.0010] (.0013)	[-.0018] (.0019)	[.0009] (.0012)	[-.0017] (.0019)	[.0009] (.0012)
No Male At Home	.011	-.081	[.0423] (.1331)	[-.1052] (.0737)	[.0874] (.1284)	[-.0429] (.0700)	[.0898] (.1274)	[.0233] (.0682)	[.1432] (.1311)	[.0175] (.0695)
Siblings	-.165	-.097	-.0338 (.0162)	[-.0125] (.0071)	[-.0226] (.0158)	[-.0014] (.0069)	[-.0197] (.0157)	[.0060] (.0067)	[-.0198] (.0156)	[.0056] (.0068)
Test Score	.320	.352			.0093 (.0021)	.0094 (.0013)	.0063 (.0025)	.0056 (.0014)	.0061 (.0025)	.0057 (.0014)
Education	.320	.396					.0329 (.0148)	.0519 (.0085)	.1651 (.0706)	.0442 (.0187)
Years Past Secondary	.299	.364							-.1642 (.0775)	[.0206] (.0282)
B.A.	.301	.301							[.1347] (.1368)	[-.0674] (.1027)
Constant			9.7464	9.5141	8.8823	8.6791	8.7836	8.4701	7.3082	8.5432
R^2			.048	.023	.122	.131	.140	.199	.157	.200
SD of Residuals			.4941	.3928	.4754	.3707	.4715	.3564	.4688	.3570

Coefficients in brackets are less than 1.96 times their standard errors.

Table 16E: Regressions of Ln Earnings on Respondent's Characteristics for Kalamazoo Brothers
Complete Data Sample, Stratified by Test Score (Less than 90, N = 168; 90 to 110, N = 349; over 110, N = 175)

	Zero Order Correlation			1			2			3		
	Under 90	90-110	Over 110	Under 90	90-110	Over 110	Under 90	90-110	Over 110	Under 90	90-110	Over 110
							B (s.e.)	B (s.e.)	B (s.e.)	B (s.e.)	B (s.e.)	B (s.e.)
Father's Education	.011	.100	.108	[.0001] (.0119)	[.0060] (.0087)	[.0026] (.0092)	[-.0002] (.0121)	[.0065] (.0085)	[.0029] (.0091)	[-.0037] (.0116)	[.0009] (.0087)	[-.0027 (.0089
Father's Occupation	.133	.115	.173	[.0028] (.0016)	[.0014] (.0012)	[.0027] (.0015)	[.0028] (.0016)	[.0010] (.0012)	[.0024] (.0015)	[.0015] (.0016)	[.0004] (.0012)	[.0008 (.0145
No Male at Home	.019	-.037	.001	[.0350] (.0942)	[-.0623] (.1052)	[-.0031] (.1482)	[.0377] (.0956)	[-.0513] (.1040)	[.0159] (.1465)	[.1170] (.0937)	[-.0234] (.1046)	[.0748 (.1465
Siblings	-.016	-.137	.006	[.0001] (.0121)	-.0195 (.0095)	[.0068] (.0149)	[.0003] (.0122)	[-.0168] (.0094)	[.0159] (.0152)	[.0141] (.0121)	[-.0105] (.0096)	[.0161 (.0145
Test Score	.009	.186	.182				[.0009] (.0049)	.0123 (.0040)	.0082 (.0035)	[-.0032] (.0048)	.0101 (.0041)	[.0042 (.0036
Education	.301	.244	.368							.0881 (.0268)	[.0370] (.0334)	[.0355 (.0870
Years of Higher Education	.213	.222	.369							[-.0655] (.0631)	[.0273] (.0451)	[-.0215 (.0921
B.A.	.200	.170	.388							[.2682] (.2590)	[-.1701] (.1318)	.2155 (.1097
Constant				9.3814	9.5001	9.6900	9.3102	8.278	8.7001	8.7373	8.092	8.7800
R^2				.019	.029	.032	.019	.055	.062	.124	.085	.169
SD of Residual				.3877	.4450	.3835	.3889	.4397	.3786	.3709	.4345	.3595

Coefficients in brackets are less than 1.96 times their standard errors.

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Table 19 Construction of Orthogonal Nonlinear and Interaction Terms in the Kalamazoo Sample (* indicates multiplication; ** indicates exponent.)

Variable	Construction
Father's Education^2	POPED(POPED-.96949(73.82/3.3227))
Sibling^2	SIBS(SIBS-.95243(29.71/2.5242))
Test Score^2	IQ(IQ-.99465(3164.199/15.3259))
Native Father by Father's Education	USPOP*POPED-1/(1-(.25059**2))*((.80207-.25059*.73866)*(5.0086/.4046)*USPOP+(.73866-.25059*.80207)*(5.0086/3.3227)*POPED)
No Male Head by Father's Education	-[MALEHD*POPED-1/(1-(.05268**2))*((.59198-.05268*.81872)*(4.0284/.2496)*MALEHD+(.81872-.05268*.59198)*(4.0284/3.3227)*POPED)]
Father's Occupation by Number of Siblings	POPOC*SIBS-1/(1-((-.22406)*2))*((.50133-(-.22406)*.61571)*(112.2204/22.5036)*POPOC+(.61571-(-.22406)*.50133)*(112.2204/2.5242)*SIBS)
Native Father by Father's Occupation	USPOP*POPOC-1/(1-.17054**2))*((.62301-.17054*.81743)*(26.1568/.4046)*USPOP+(.81743-.17054*.62301)*(26.1568/22.5036*POPOC)
Father's Occupation by Father's Education	POPOC*POPED-1/(1-(.46987**2))*((.86987-.46987*.78766)*(.355.1579/22.5036)*POPOC+(.78766-.46987*.86987)*(355.1579/3.3227)*POPED)
BA by Father's Occupation	BA*POPOC-1/(1-(.33146**2))*((.88104-.33146*.54263)*(25.2019/.4334)*BA+(.54263-.33146*.88104 25.2019/22.5036)*POPOC)
Test Score by Number of Siblings	IQ*SIBS-1/(1-((-.27579)**2))*(((-.06504)-(-.27579)*.96614)*(238.3764/15.3259)*IQ+(.96614-(-.27579)*(-.06504))*(238.3764/2.5242)*SIBS)
Test Score by Education	IQ*ED-1/(1-(.57603**2))*((.83878-.57603*.91982)*(441.0103/15.3259)*IQ+(.91982-.57603*.83878)*(441.0103/2.7297)*ED)
Years Higher Education by Father's Occupation	YRSPSE*POPOC-1/(1-(.34914**2))*((.86335-.34914*.59280)*(137.5617/2.3091)*YRSPSE+(.59280-.34914*.86335)*(137.5617/22.5036)*POPOC)

Table 19 Continued

No Male Head by Father's Occupation	-[MALEHD POPOC-1/(1-(.0593**2))*((.40449-.0593*.9113)*(23.8738/.2496)*MALEHD+(.9113-.0593*.40449)*(23.8738/22.5036)*POPOC)
Education by Occupation	ED*OC-1/(1-(.59085**2))*((.81718-.59085*.9345)*(415.1408/2.7297)*ED+(.9345-.59085*.81718)*(415.1408/23.1572)*OC)

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Appendix J

Comparing Census Data on Education and Income: 1940-1970

by Susan Bartlett

This Appendix describes the variables, the populations covered, the treatment of missing data, and the categorization of variables in the published 1940, 1950 and 1960 Census tables.[1/] It also describes how I constructed my three comparison samples from the 1970 Public Use tape. It gives the frequency distributions of the variables for each comparison and the cross tabulations of Ln Income (or Ln Wages) by Age and Education for each comparison. These data underlie the regression analysis in the text.

The 1960 Census

The variable definitions were essentially the same in the 1960 and the 1970 Censuses. The only difference was that the 1970 Census asked the income question in more detail.

If an individual did not report his 1959 income, the Census allocated him the same value as the last individual processed of similar sex, age, race, relationship to the head of the household, major occupation

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[1/] These tables are found in:

1. U.S. Bureau of the Census, U.S. Census of Population: 1940. Educational Attainment by Economic Characteristics and Marital Status. U. S. Government Printing Office, Washington, D.C., 1947. (Tables 29 and 31, pp. 147 and 161).
2. U.S. Bureau of the Census, U.S. Census of Population: 1950. Vol. IV, Special Reports, Part 5. Chapter B, Education. U.S. Government Printing Office, Washington, D.C., 1953. (Table 12, p. 5B-107).
3. U.S. Bureau of the Census, U.S. Census of Population: 1960. Subject Reports, Educational Attainment, Final Report PC (2) -5B. U.S. Government Printing Office, Washington, D.C., 1963. (Table 6 pp. 88-89).

group, class of worker and number of weeks worked in 1959. If an individual reported either wage and salary earnings or self-employment income, but failed to report other income, the Census assumed that he had no other income.

The Census used the same procedure to allocate missing values for 1969 income, but used more detailed categories within each allocating characteristic. If an individual did not report on any type of 1969 income, the Census assigned a value. These minor changes should not affect comparability.[2/]

Because education was not one of the characteristics used to allocate income to non-respondents, the correlation and the regression coefficient of education will be slightly biased downward. The bias should be roughly the same in both years.

In both 1960 and 1970, if an individual did not report the highest grade of school he attended, the Census allocated him a value based on his age, sex, race and occupation, if employed. The Census used more detailed categories of these characteristics to allocate education in 1970 than in 1960.

The 1960 tables grouped men who reported negative total income with men reporting $1-$499, and excluded men who received zero income. I placed identical restrictions on the 1970 data. About 3 percent of all men aged 25 to 64 received no income in 1959 compared to 2 percent in 1969.

[2/] Descriptions of the allocation procedures are found: (1) U.S. Census of Population and Housing, 1960: Principle Data Collection Forms and Procedures. U.S. Government Printing Office, Washington, D.C., 1966, pp. 199-201 and 219-221. (2) U.S. Bureau of the Census. U.S. Census of Population and Housing: 1970. Procedural History PHC(R)-1G, Advanced Issuance of Chapter 15. Washington, D.C. 1974 (p. 15-46).

Table 1 compares the frequency distributions of Education, Age, Work Experience and Income from the published 1960 Census tables to my comparably defined sample from the 1970 Census Public Use tape. Table 2 presents the mean and standard deviation of Ln Income by education and age groups. Mean income of men aged 25 to 64 was $5715.53 in 1959 and $9359.75 in 1969. I calculated 1969 income values by dividing all 1969 incomes by 9359.75/5715.53 = 1.638 and then grouping the resulting values into the 1959 income categories. I add ln (1.638) = 0.493 to each category mean to make the data reflect actual 1969 incomes.

The 1950 Census

The published 1950 Census tables excluded residents of Alaska and Hawaii. I therefore excluded 1970 residents of these states when constructing my comparison group. I also excluded persons who reported negative income or zero income from both the 1950 and 1970 samples.

The 1950 Census treated a person as having reported his entire income if either: (1) he reported wages and salaries, (2) he reported self-employment income, or (3) he reported other income, and did not work during 1949. If an individual met at least one of these three criteria, and any other income entry was blank, the Census assumed that the blank represented zero. If an individual did not report at all, the Census treated him as a non-respondent, and did not assign him an income. The Census excluded these non-respondents from the published 1950 tabulations.[3]

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[3] See U.S. Bureau of the Census. 1950 Censuses - How They Were Taken. U.S. Government Printing Office, Washington, D.C., 1955, 0. 61.

Table I: Coding of Questions and Frequencies of Responses for Males Aged 25 to 64 With Non-Zero Income: 1960 Census Tables (N=1,966,052) and 1970 Census 1/1000 Sample (N=42,192)

Variable Name	Question	Coding	Frequency	
			1960	1970
Age	1960 Month and Year of Birth	25-29 = 27.5	13.1%	15.1%
		30-34 = 32.5	14.5	12.9
		35-44 = 40	29.1	25.8
	1970 Month and Year of Birth and Age at Last Birthday	45-54 = 50	24.9	25.9
		55-64 = 60	18.3	20.4
			100.0%	100.0%
Education	1960 and 1970 Calculated from the response to two questions: 1. What is the highest grade (or year) of regular school he has ever attended? 2. Did he finish the highest grade (or year) he attended?	0 [1]	1.2%	.9%
		(1-4) = 3	5.2	3.0
		(5-8) = 7	29.1	19.0
		(9-11) = 10	20.4	19.6
		12	24.0	30.8
		(13-15) = 14	9.4	11.5
		(16+) = 17	10.8	15.3
			100.0%	100.0%
Work Experience	1960 and 1970 Experience in the year prior to the survey. Calculated from grouped data as: 1. If Education is less than or equal to 7, Experience = Age (in year prior to survey) - 13.5. 2. If Education is greater than 7, Experience = Age (in year prior to survey) - (Education + 6.5).	3-4	1.9%	3.0%
		5-9	8.1	10.7
		10-14	10.9	10.1
		15-19	12.9	11.6
		20-24	14.7	13.4
		25-29	12.3	10.9
		30-34	10.0	13.2
		35-39	13.1	10.2
		40-44	5.2	8.3
		45-45.5 [2]	10.8	8.5
			100.0%	100.0%

Table 1 Continued

Variable Name	Question	Coding		Frequency	
				1960	1970
Annual Income	1960 - Income in 1959. The sum of the responses to three questions: 1. How much did this person earn in 1959 in wages, salary, commissions or tips from all jobs? (Before deductions for taxes, bonds, dues or other items.) 2. How much did he earn in 1959 in profits or fees from working in his own business, professional practice, partnership or farm? (Net income after business expenses.) 3. Last year (1959) did this person receive any income from: social security, pensions, veteran's payments, rent (minus expenses), interest or dividends, unemployment insurance, welfare payments, and any other source? 1970 - Income in 1969, deflated. The sum of the responses to six questions: 1. How much did this person earn in 1969 in wages, salary, commissions, bonuses, or tips from all jobs? (Before deductions for taxes, bonds, dues or other items.) 2. How much did he earn in 1969 from his own non-farm business, professional practice or partnership? (Net after business expenses.)	(1-999 or loss)	= $500	6.5%	5.7%
		(1000-1999)	= 1500	7.1	6.9
		(2000-2999)	= 2500	9.1	7.9
		(3000-3999)	= 3500	12.1	14.4
		(4000-4999)	= 4500	14.8	16.7
		(5000-5999)	= 5500	16.0	12.4
		(6000-6999)	= 6500	11.3	12.4
		(7000-9999)	= 8500	14.4	14.6
		(10000-14999)	=12000	5.3	5.6
		(15000 +)	=24000 [3]	3.2	3.3
				100.0%	100.0%

Table 1 Continued

Variable Name	Question	Coding	Frequency	
			1960	1970
	1970 continued			
	3. How much did he earn in 1969 from his own farm? (Net after operating expenses. Include earnings as a tenant farmer or sharecropper.)			
	4. How much money did he receive in 1969 from social security or railroad retirement?			
	5. How much did he receive in 1969 from public assistance or welfare payments? (Include aid for dependent children, old age assistance, general assistance, aid to the blind or totally disabled. Exclude separate payments for hospital or other medical care.)			
	6. How much did he receive in 1969 from all other sources? (Include interest, dividends, veteran's payments, pensions and other regular payments.)			

Table Notes:

1/The Census Income by Education tables reported the education variable in categories. I calculated the mean for each category from detailed tables of education by age, race and sex, published by the Census. (1970, Detailed Characteristics, U. S. Summary. Table 199, p. 1-628. 1960, Detailed Characteristics, U. S. Summary. Table 173, p. 1-405.)

2/Because the Census tables grouped education and age values, the implied distribution of experience is slightly irregular. This should not seriously bias the results.

3/I calculated the values for the top two intervals using a 1/10,000 subsample of the 1970 Public Use tape. I divided 1969 incomes by the ratio of mean 1969 income to mean 1959 income and calculated the category means using actual dollar values of individual income.

Table 2: Ln Income by Age and Education for Males Aged 25 to 64 with Non-Zero Income: Census Surveys, 1959 (N=1,966,052) and 1969 (N=42,192)

	Year	Years of Education	Age					
			25-29	30-34	35-44	45-54	55-64	Total
Mean (S.D.) N	1959	0	7.238 (.910) 1323	7.323 (.907) 1770	7.313 (.900) 4555	7.424 (.913) 6501	7.488 (.946) 10272	7.413 (.927) 24421
	1969	0	8.145 (1.013) 30	8.344 (1.029) 46	8.080 (1.034) 85	7.825 (.944) 95	7.805 (.901) 122	7.964 (.981) 378
	1959	1-4	7.462 (.849) 6397	7.607 (.854) 8779	7.647 (.870) 22611	7.612 (.895) 29741	7.581 (.940) 34051	7.600 (.899) 101579
	1969	1-4	8.098 (.877) 50	8.276 (.759) 74	8.188 (.834) 270	8.166 (.820) 345	7.962 (.883) 508	8.092 (.854) 1247
	1959	5-8	7.930 (.766) 41187	8.099 (.740) 55474	8.165 (.756) 132662	8.170 (.792) 175083	8.072 (.862) 167281	8.116 (.802) 571687
	1969	5-8	8.331 (.758) 432	8.529 (.762) 556	8.622 (.736) 1714	8.592 (.776) 2342	8.497 (.818) 2962	8.545 (.785) 8006
	1959	9-11	8.184 (.675) 53208	8.384 (.633) 65185	8.453 (.646) 122651	8.444 (.720) 100782	8.333 (.838) 58258	8.386 (.703) 400084
	1969	9-11	8.606 (.700) 1050	8.757 (.667) 1030	8.854 (.661) 2103	8.845 (.719) 2335	8.747 (.777) 1740	8.785 (.713) 8258
	1959	12	8.357 (.584) 84340	8.531 (.570) 80578	8.622 (.605) 167059	8.604 (.705) 96633	8.496 (.828) 42556	8.544 (.648) 471166
	1969	12	8.800 (.581) 2471	8.966 (.559) 1994	9.053 (.603) 3530	9.055 (.683) 3251	8.917 (.794) 1765	8.974 (.650) 13011
	1959	13-15	8.331 (.681) 33937	8.651 (.610) 30781	8.800 (.650) 56434	8.797 (.750) 39864	8.673 (.869) 23982	8.672 (.724) 184998
	1969	13-15	8.795 (.694) 1050	9.072 (.668) 727	9.196 (.654) 1212	9.255 (.709) 1156	9.135 (.839) 710	9.096 (.727) 4855
	1959	16+	8.451 (.703) 37722	8.866 (.626) 42184	9.079 (.668) 66990	9.127 (.761) 41814	9.020 (.863) 23416	8.928 (.749) 212126
	1969	16+	8.845 (.753) 1269	9.275 (.669) 997	9.537 (.658) 1961	9.628 (.723) 1397	9.520 (.825) 813	9.378 (.770) 6437
	1959	Total	8.236 (.709) 258114	8.440 (.709) 284740	8.502 (.760) 572963	8.401 (.848) 490419	8.203 (.938) 359815	8.378 (.813) 1966052
	1969	Total	8.735 (.692) 6352	8.937 (.680) 5424	9.020 (.740) 10875	8.965 (.813) 10921	8.740 (.897) 8620	8.896 (.789) 42192

Theoretically, one should be able to apply the same restrictions to 1970 respondents. Unfortunately, the flags on the 1970 Public Use tape that identify individuals who failed to report their 1969 incomes were defective. Therefore, I could not exclude these individuals from the 1970 sample. This makes my 1950 and 1970 samples somewhat noncomparable.[4]

The 1950 Census also excluded men from the published tabulations if they failed to report the highest grade of school they had attended. If an individual did not report whether he completed the highest grade attended, the Census used his age and whether he was still enrolled in school to resolve this question.[5] The 1970 Census allocated answers to men who failed to report whether they completed the highest grade attended on the basis of their age and the highest grade attended. Since these allocation procedures were similar, I eliminated men who did not report the highest grade they attended and retained men who failed to report whether they completed the grade in the 1970 comparison sample.

4/ We received a special tape from the Census Bureau correcting the income allocation flags after I had completed this analysis. We did some later analysis which showed that excluding the non-respondents did not significantly alter the results.

If one includes men with allocated values, mean Education for non-student, non-institutional, non-military males aged 25-64 with positive earnings in 1969 was 11.425 with a standard deviation of 3.558. Mean Ln Earnings was 8.936 with a standard deviation of 0.757. The correlation between Education and Ln Earnings was 0.370. An additional year of education thus increased Ln Earnings by (0.370)(0.757/3.558) = 0.079 in a bivariate regression. Excluding men to whom the Census allocated a value for education because the respondent failed to report education raised mean education to 11.449 with a standard deviation of 3.556. Excluding men to whom the Census allocated a value for earnings raised mean Ln Earnings to 8.946 with a standard deviation of 0.743. The correlation between Education and Ln Earnings for men who reported both variables was 0.381. The implied regression coefficient was (0.381)(0.743/3.556) = 0.080. None of these changes is large enough to alter any conclusion drawn in Chapter 7.

5/ See U.S. Bureau of the Census. 1950 Censuses - How They Were taken. U.S. Government Printing Office, Washington, D.C., 1955, pp. 55-56.

After applying these restrictions, the published 1950 table covered 91 percent of all men aged 25 to 64 and my 1970 table covered 93 percent.

Table 7.3 describes the variables used in each year and shows the frequency distribution of responses. Table 4 presents breakdowns of Ln Income by Age and Education. The mean income of the 25 to 64 year old males in my sample was $3256.41 in 1949 compared to $9469.74 in 1969. To make my 1969 income categories comparable to the 1949 categories, I divided all incomes on the 1970 tape by 9469.74/3256.41 = 2.908 and grouped the resulting values into the categories of the 1950 tables. I then added ln (2.908) = 1.067 to each category mean to make the data reflect actual 1969 income.

The 1940 Census

The 1940 Census did not collect detailed information on income from self-employment, property, or transfer payments. Published data cover only wage and salary income, and only those men who reported that they did not receive more than $50 in income from other sources. 47 percent of the men aged 25 to 64 who reported receiving wage and salary earnings in 1939 also reported receiving more than $50 in income from other sources. (This includes men who did not report whether they received other income.) Allowing for changes in the mean wages of men aged 25 to 64, $50 in 1939 was equivalent to $315 in 1969, 39 percent of men aged 25 to 64 received more than $315 in non-wage income in 1969. I excluded these men from the 1969 sample. These exclusions reduce both the mean and the variance of education. In 1940, the education of men aged 25 to 64 with less than $50 in non-wage and salary income was 8.860 years with a standard deviation of 3.535 years, while the mean for 25 to 64 was 8.430 years with

Table 3: Coding of Questions and Frequencies of Response for Males Aged 25 to 64 With Positive Income: 1950 Census Tables (N=1,140,665) and 1970 Census 1/1000 Sample (N=40,248)

Variable Name	Question	Coding	Frequency 1950	Frequency 1970
Age	1950 How old was he on his last birthday? 1970 Month and Year of Birth and Age at Last Birthday.	25-29 = 27.5	16.1%	15.0%
		30-34 = 32.5	15.4	12.9
		35-44 = 40	28.6	25.8
		45-54 = 50	22.9	25.8
		55-64 = 60	17.0	20.4
			100.0%	100.0%
Education	1950 and 1970 Calculated from the response to two questions: 1. What's the highest grade of school he has attended? 2. Did he finish this grade?	0 1/	1.7%	.9%
		(1-4) = 3	7.9	2.9
		(5-8) = 7	36.6	18.7
		(9-11)= 10	18.5	19.2
		12	20.0	31.0
		(13-15)=14	7.6	11.7
		(16+) = 17	7.8	15.6
			100.0%	100.0%
Work Experience	1950 and 1970 Experience in the year prior to the survey. Calculated from grouped data as: 1. If Education is less than or equal to 7, Experience = Age (in year prior to survey) - 13.5. 2. If Education is greater than 7, Experience = Age (in year prior to survey) - (Education + 6.5).	3-4	1.6%	3.1%
		5-9	8.1	10.8
		10-14	13.7	10.0
		15-19	12.7	11.6
		20-24	11.7	13.3
		25-29	15.3	11.0
		30-34	[illegible].8	13.1
		35-39	14.9	10.2
		40-44	3.8	8.3
		45-45.5 2/	11.4	8.4
			100.0%	100.0%

Table 3 continued

Variable Name	Question	Coding	Frequency	
			1950	1970
Annual Income	1950 - Income in 1949. The sum of the responses to three questions: 1. Last year (1949) how much money did he earn working as an employee for wages and salary? (Before deductions for taxes, etc.) 2. Last year, how much money did he earn working in his own business, professional practice or farm? (Net income) 3. Last year, how much did he receive from interest, dividends, veteran's allowances, pensions, rents, or other income (aside from earnings)? 1970 - Income in 1969, deflated. (See Table 1)	(1-499) = $ 250	5.0%	4.7%
		(500-999) = 750	7.1	5.1
		(1000-1499) = 1250	8.1	7.7
		(1500-1999) = 1750	8.8	9.3
		(2000-2499) = 2250	12.3	14.4
		(2500-2999) = 2750	12.1	13.4
		(3000-3999) = 3500	23.4	21.7
		(4000-4999) = 4500	10.7	10.4
		(5000-5999) = 5500	5.2	5.2
		(6000-6999) = 6500	2.3	2.9
		(7000-9999) = 8500	2.5	2.8
		(10000 +) = 15000 3/	2.5	2.3
			100.0%	100.0%

Table Notes:

1/ The Census Income by Education tables reported the education variable in categories. I calculated the mean for each category from detailed tables of education by age, race and sex, published by the Census. (1970, Detailed Characteristics, U.S. Summary. Table 199, p. 1-628. For 1950, the 1960 Detailed Characteristics, U.S. Summary. Table 173, p. 1-407.)

2/ Because the Census tables grouped education and age values, the implied distribution of experience is slightly irregular. This should not seriously bias the results.

3/ I calculated the values for the top two intervals using a 1/10,000 subsample of the 1970 Public Use tape. I divided the 1969 incomes by the ratio of mean 1969 income to mean 1949 income and calculated the category means using actual dollar values of individual income.

Table 4 Lr. Income by Age and Education for Males Aged 25 to 64 with Positive Income: Census Surveys, 1949 (N = 1,140,665) and 1969 (N = 40,248)

	Year	**Years of Education**	**Age** 25-29	30-34	35-44	45-54	55-64	Total
ean S.D.)	1949	0	6.812 (.887) 1070	6.897 (.849) 1105	7.019 (.885) 3402	7.123 (.923) 5260	7.219 (.939) 8112	7.115 (.925) 18949
	1969	0	8.058 (1.072) 29	8.292 (1.055) 46	8.077 (1.076) 85	7.803 (.956) 95	7.812 (.947) 121	7.947 (1.012) 376
	1949	1-4	7.003 (.849) 7799	7.136 (.839) 8147	7.190 (.871) 21490	7.273 (.908) 25453	7.240 (.937) 27043	7.207 (.901) 89932
	1969	1-4	8.059 (.923) 48	8.213 (.788) 70	8.180 (.828) 241	8.149 (.829) 322	7.942 (.903) 467	8.072 (.867) 1148
	1949	5-8	7.450 (.737) 40246	7.597 (.723) 45934	7.698 (.740) 115836	7.730 (.790) 119802	7.597 (.863) 95296	7.649 (.786) 417114
	1969	5-8	8.320 (.759) 390	8.526 (.769) 527	8.635 (.732) 1626	8.600 (.783) 2205	8.504 (.822) 2794	8.553 (.789) 7542
	1949	9-11	7.720 (.635) 40870	7.867 (.603) 38176	7.952 (.654) 66845	7.952 (.745) 41644	7.825 (.833) 23314	7.878 (.688) 210849
	1969	9-11	8.634 (.683) 976	8.784 (.638) 944	8.869 (.643) 1978	8.860 (.711) 2169	8.754 (.769) 1655	8.802 (.699) 7722
	1949	12	7.866 (.577) 55864	8.022 (.563) 50668	8.105 (.628) 66301	8.160 (.732) 35070	8.051 (.838) 20647	8.032 (.650) 228550
	1969	12	8.818 (.566) 2371	8.981 (.539) 1910	9.068 (.582) 3385	9.068 (.663) 3117	8.935 (.769) 1700	8.989 (.630) 12483
	1949	13-15	7.764 (.720) 20361	8.11 (.632) 15819	8.253 (.691) 25099	8.274 (.807) 15903	8.110 (.902) 9464	8.101 (.762) 86646
	1969	13-15	8.809 (.685) 1008	9.101 (.634) 702	9.197 (.648) 1179	9.253 (.673) 1131	9.148 (.825) 694	9.106 (.707) 4714
	1949	16+	7.820 (.757) 17806	8.292 (.671) 15721	8.544 (.707) 27043	8.611 (.784) 17605	8.492 (.875) 10447	8.361 (.803) 88622
	1969	16+	8.841 (.756) 1229	9.282 (.671) 975	9.554 (.645) 1909	9.638 (.716) 1365	9.556 (.808) 785	9.387 (.776) 6263
	1949	Total	7.684 (.711) 184016	7.862 (.707) 175569	7.905 (.779) 326016	7.859 (.861) 260738	7.680 (.929) 194324	7.814 (.811) 1140665
	1969	Total	8.749 (.684) 6051	8.955 (.676) 5174	9.035 (.726) 10403	8.979 (.805) 10404	8.756 (.896) 8216	8.911 (.782) 40248

a standard deviation of 3.785 years.[6] The same pattern is apparent comparing men with primarily wage income to the total male population in 1970. Eliminating men with other sources of income also reduces mean experience, at least in 1970. Most important, however, is the effect on Ln Income. At least in 1970, eliminating men with more than $315 income from assets, transfers, or self-employment has no effect on the mean. But it reduces the standard deviation of Ln Income from 0.789 to 0.622[7] This presumably reflects the simultaneous elimination of high income men with substantial assets and low-income men with substantial transfers. The effects in 1939 are unknown

In 1940, 2.31 percent of the men who reported that they did not receive any income other than wages or salaries failed to report the amount of their wage or salary income. The Census excluded these men from its 1940 tabulations. The 1970 Census allocated wages to such nonrespondents, and I could not exclude them from the comparison sample.[8]

The 1940 Census tabulations excluded men who failed to report educational attainment. I therefore eliminated men who did not report the highest grade of school attended from my 1970 comparison group. The published 1940 Census tables covered only Negroes and native white Americans (i.e. anyone born in the United States or born abroad of American parents), and excluded residents of Alaska and Hawaii. I placed the same restrictions on my 1970 sample. The elimination of the foreign-born obviously restricts the 1940 sample more than it does the 1970 sample.

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[7] See Table 7.1 of Chapter 7.

[8] The evidence cited in footnote 4 indicates that this discrepancy is inconsequential.

The 1940 Census tables covered 67.1 percent of all men aged 25 to 34, 54.5 percent of those 35 to 44, 42.3 percent of those 45 to 54 and 36.1 percent of those 55 to 64. My 1970 comparison sample included 73.0 percent of men 25 to 34, 65.3 percent of men 35 to 44, 56.4 percent of men 45 to 54 and 44.6 percent of men 55 to 64.

Mean wage and salary income was $1323.68 in 1939, compared to $8348.37 for my 1969 comparison sample. I therefore divided all wage values on the 1970 tape by 8348.37/1323.68 = 6.307, and grouped the data into the 1939 categories. I added ln (6.307) = 1.842 to each category mean to make the values reflect actual 1969 wages.

Table 5 summarizes the questions, coding and frequency distributions of the four variables used in the 1939 to 1969 comparison. Table 6 presents cross tabulations of Ln Wages by Age and Education.

Table 5: Coding of Questions and Frequencies of Response for Males Aged 25 to 64 With Primarily Wage and Salary Income: 1940 Census Tables (N=790,509) and 1970 Census 1/1000 Sample (N= 26,291)

Variable Name	Question	Coding	Frequency 1940	Frequency 1970
Age	1940 Age at last birthday.	25–29 = 27.5	22.2%	18.5%
		30–34 = 32.5	19.2	15.0
	1970 Month and year of birth and age at last birthday.	35–44 = 40	29.3	27.6
		45–54 = 50	19.1	23.8
		55–64 = 60	10.3	15.1
			100.0%	100.0%
Education	1940 Highest grade of school completed.	0 1/	1.7%	.6%
		(1-4) = 3	7.8	2.6
		(5-8) = 7	45.1	17.7
		(9-11)= 10	18.6	20.8
	1970 Calculated from the response tc two questions:	12	15.6	33.2
		(13-15)=14	5.8	11.5
		(16+) = 17	5.5	13.6
			100.0%	100.0%
	1. What is the highest grade of school he has attended?			
	2. Did he finish this grade?			
Work Experience	1940 and 1970 Experience in year prior to survey. Calculated from grouped data as:	3-4	1.4%	3.5%
		5-9	8.2	13.0
		10-14	18.6	12.3
		15-19	16.2	11.9
		20-24	9.2	15.1
	1. If Education is less than or equal to 7, Experience = Age (in year prior to survey) - 13.5.	25-29	18.5	10.0
		30-34	4.8	12.7
		35-39	13.5	8.6
		40-44	2.0	6.5
		45-45.5 2/	7.5	6.3
			100.0%	100.0%
	2. If Education is greater than 7, Experience = Age (in year prior to survey) - (Education + 6.5).			

Table 5 Continued

Variable Name	Question	Coding	Frequency 1940	1970
Annual Wages	1940 - Wage and salary earnings in 1939. 1. Amount of money wages or salary received (including commissions). 2. The Census excluded an individual from the tabulations if, he received income of $50 or more from sources other than money wages or salary. 1970 - Wage and salary earnings in 1969, deflated. 1. How much money did this person earn in 1969 in wages, salary, commissions, bonuses or tips from all jobs? (Before deductions for taxes, bonds, dues, or other items) 2. I excluded an individual if he received income of $315 or more from sources other than wage and salary earnings. 4/	(1-499) = 250	20.0%	8.3%
		(500-999) = 750	24.4	22.0
		(1000-1499) = 1250	22.4	34.7
		(1500-1999) = 1750	16.4	21.7
		(2000-2499) = 2250	8.7	7.5
		(2500-2999) = 2750	3.3	2.8
		(3000- 4999) = 4000	3.7	2.5
		(5000 +) = 8000 3/	1.1	.5
			100.0%	100.0%

Table Notes:

1/ The Census Income by Education tables reported the education variable in categories. I calculated the mean for each category from detailed tables of education by age, race and sex, published by the Census. (1970, Detailed Characteristics, U.S. Summary. Table 199, p. 1-628. 1940, U.S. Summary, Characteristics by Age, Table 18, p. 78.)

2/ Because the Census tables grouped education and age values, the implied distribution of experience is slightly irregular. This should not seriously bias the results.

3/ I calculated the values for the top interval using a 1/10,000 subsample of the 1970 Public Use tape. I divided 1969 wages by the ratio of 1969 mean wages to 1939 mean wage and calculated the category mean using actual dollar values of individual income.

4/ See page 22.

Table 6 : Ln Wages by Age and Education for Males Aged 25 to 64 with Primarily Wage and Salary Income: Census Surveys, 1939 (N=790,509) and 1969 (N=26,291) J16

	Year	Year of Education	Age					
			25-29	30-34	35-44	45-54	55-64	Total
Mean (S.D.) N	1939	0	5.913 (.628) 1447	6.026 (.686) 1552	6.072 (.691) 3638	6.090 (.716) 3659	6.040 (.692) 2882	6.047 (.693) 13178
	1969	0	8.669 (.511) 16	8.718 (.673) 18	8.449 (.821) 39	8.227 (.636) 47	8.085 (.770) 45	8.337 (.741) 165
	1939	1-4	5.918 (.588) 8407	6.067 (.659) 8752	6.203 (.712) 18176	6.293 (.771) 15585	6.221 (.760) 10988	6.171 (.724) 61908
	1969	1-4	8.068 (.787) 33	8.247 (.632) 49	8.226 (.730) 171	8.212 (.695) 208	8.220 (.672) 216	8.214 (.696) 677
	1939	5-8	6.445 (.715) 58557	6.657 (.737) 59304	6.839 (.760) 111424	6.897 (.796) 81276	6.749 (.832) 45761	6.746 (.783) 356322
	1969	5-8	8.338 (.658) 296	8.594 (.597) 390	8.657 (.617) 1155	8.663 (.620) 1402	8.649 (.586) 1405	8.631 (.615) 4648
	1939	9-11	6.746 (.676) 40896	6.969 (.674) 33868	7.136 (.715) 42634	7.183 (.778) 20973	7.015 (.846) 8315	6.989 (.732) 146686
	1969	9-11	8.642 (.596) 834	8.762 (.560) 762	8.874 (.553) 1523	8.886 (.550) 1451	8.824 (.559) 899	8.818 (.567) 5469
	1939	12	6.918 (.632) 41938	7.170 (.629) 27494	7.364 (.694) 30293	7.437 (.767) 16288	7.318 (.833) 7359	7.176 (.709) 123372
	1969	12	8.821 (.497) 2000	8.972 (.481) 1558	9.045 (.494) 2444	9.051 (.528) 1905	8.946 (.566) 809	8.972 (.515) 8716
	1939	13-15	7.060 (.631) 12514	7.299 (.641) 10222	7.476 (.717) 12822	7.481 (.810) 7101	7.263 (.875) 3047	7.309 (.726) 45706
	1969	13-15	8.831 (.585) 774	9.087 (.518) 498	9.167 (.535) 818	9.199 (.608) 632	9.024 (.764) 314	9.060 (.605) 3036
	1939	16+	7.227 (.632) 11455	7.556 (.611) 10624	7.804 (.694) 12252	7.862 (.795) 6251	7.709 (.879) 2752	7.593 (.730) 43334
	1969	16+	8.854 (.661) 920	9.241 (.575) 659	9.447 (.550) 1099	9.428 (.634) 625	9.398 (.638) 277	9.249 (.653) 3580
	1939	Total	6.694 (.737) 175214	6.885 (.771) 151816	6.987 (.825) 231239	6.980 (.873) 151132	6.783 (.900) 81104	6.880 (.822) 790509
	1969	Total	8.763 (.592) 4873	8.943 (.571) 3934	8.999 (.611) 7249	8.945 (.640) 6270	8.801 (.655) 3965	8.904 (.622) 26291

Appendix K

Talent 29-Year-Old Brothers

By James Crouse

The Talent 11 year followup sample contained data on 196 pairs of brothers who were both in 11th or 12th grade of a Talent high school in 1960. Twenty-one percent of these brothers were twins. About half were in 11th grade during the initial survey in 1960. The remainder were in 12th grade. The sample would, of course, have been much larger if followup data had been available for 9th and 10th graders when we did our search. The ratio of twins to ordinary brothers would also have been much lower. Selecting only brothers enrolled in adjacent grades may impose other biases.

I eliminated individuals who reported that they were still in school over half time in 1972. I also eliminated military personnel. I also eliminated all twins. Talent collected earnings only for respondents with paid jobs, so the survey design eliminated all persons with zero or negative earnings.

A respondent's report of his background characteristics predicted his brother's success about as well as the respondent's own success. This means that the respondent's test score, education, occupation, and earnings do not bias his reports of his background--though these traits may affect the absolute magnitude of the respondent's errors. It follows that if a respondent fails to report his Father's Education or Father's Occupation, one can assign the brother's report with no loss of information. But I did this only if both brothers reported having a male head of the family. If both brothers reported no male head I assigned the mean for Father's Education and Father's Occupation. If brothers disagreed on whether a male head was present, I made no assignments because I had no way of knowing which brother to believe. Brothers' reports of other background characteristics (Race and Siblings) were assigned if not reported by one brother, without regard to father's characteristics. I then restricted my sample to pairs who both had data on the basic variables. This meant that at least one brother had to report Race, Father's Education, Father's Occupation, and Siblings. Both had to report Male Head Absent, Years of Education, Occupation, and Hourly Earnings. **Both brothers also had to have taken 8 of the Talent tests.** These restrictions reduced the sample from 310 to 198 individuals, or 99 pairs.

Table 1 shows the means and standard deviations for this sample. Table 2 presents the correlations among variables for the 198 individuals in the sample. Table 3 shows the correlations of a respondent's characteristics with his brother's characteristics for 99 pairs. These correlations are calculated from a data tape on which every pair appears twice, with the order reversed. They are therefore equivalent to intra-class correlations.

Table 1: Means and Standard Deviations for Talent Brothers Sample. N = 198 Individuals

	Means	Standard Deviations
White	.985	.123
Father's Ed.	11.114	4.015
Father's Oc.	34.293	21.815
Male Head Absent	.061	.240
Siblings	4.283	1.846
Test Score	107.570	13.588
Education	14.439	2.471
Occupation	49.601	25.643
Hourly Earnings	4.745	1.850
Ln Hourly Earnings	1.480	.407

Table 2: Correlations Among Variables for Talent Brothers Sample. N = 198 Individuals

	1	2	3	4	5	6	7	8	9	10
White	1.000									
Father's Ed.	.055	1.000								
Father's Oc.	.026	.626	1.000							
Male Head Absent	.032	.054	-.083	1.000						
Siblings	-.183	-.161	-.163	.237	1.000					
Test Score	-.020	.367	.387	-.117	-.141	1.000				
Education	-.096	.465	.371	-.097	-.196	.632	1.000			
Occupation	-.057	.309	.356	-.134	-.113	.484	.706	1.000		
Hourly Earnings	.033	.068	.124	.026	-.146	.365	.392	.337	1.000	
Ln Hourly Earnings	.036	.035	.096	.013	-.136	.356	.366	.321	.960	1.000

Table 3: Correlations Between Siblings For Talent Brothers Sample. N = 99 Pairs

	Brothers				
Respondent	1	2	3	4	5
Test Score	.580				
Education	.451	.546			
Occupation	.359	.417	.329		
Hourly Earnings	.255	.234	.147	.242	
Ln Hourly Earnings	.216	.210	.125	.226	.207